THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

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THE FUTURE OF THE CLYDE VALLEY

THE interim report on the Clyde Valley area has now been presented to the Regional Planning Advisory Committee by their consultant, Professor Patrick Abercrombie, and his deputy Mr. R. H. Matthew. The area covered comprises Ayrshire (north of the River Doon), Lanarkshire, Renfrew, Dumbarton and the Kilsyth district of Stirling. This is equivalent to the watershed of the Clyde plus a strip of coast to the north-east of the Firth.

The fact that the region includes the whole of the largest industrial group in Scotland, with Glasgow as its centre, emphasises its demand for intensive study. Around this focal point a number of busy manufacturing towns have grown up and there is grave danger of the whole series becoming an agglommeration past the wit of man to disentangle. Fortunately, that point has not yet been reached, and though there are difficult corners to be negotiated, the watchful eye of the skilled expert is now looking into these and an appropriate course of action is being defined.

The city of Glasgow, with a population already second only to London in the United Kingdom, is throwing out tentacles which would in a few years embrace the surrounding towns of Paisley and Renfrew to the west, Barrhead and Rutherglen on the south, with Coatbridge and Airdrie to the east, and prompt measures are needed to preserve a suitable proportion of open space within this encircling ring, especially in view of the fact that ranged outside it is a further series of important centres including Greenock, Dumbarton, and the Lanark mining area.

This report deals mainly with the immediate needs as regards housing, based on the estimated possibilities during the first three years after a start becomes possible, but it is pointed out that further developments will have to be considered as soon as the position enables the reorganisation of industry and other communal factors to be studied; thus out of the housing proposals of the city of Glasgow the consultants accept 20 schemes providing for 13,751 houses, the maximum possible in three years output, but suspend their decision on other large schemes in view of the claims for open space and for agriculture. In one case building is definitely condemned as eliminating the only large open space in a densely built-up area between Glasgow and Rutherglen.

It is estimated that in the entire region some 200,000 houses are needed to replace those now unfit, and to relieve overcrowding. These would accommodate 800,000 persons, which would be some 35 per cent. of the total population of 2,300,000. At present, apart from Glasgow, sixteen authorities are working under the Government scheme for the advance servicing of sites and six larger authorities intend to carry out this preparatory work on their own; the sites so prepared will accommodate some 17,000 homes. So far fifteen authorities outside Glasgow have asked for about 6,000 temporary houses out of the allocation for Scotland, which is thought to be some 50,000.

The report emphasises the importance of community planning, and in the decisions it makes stress is laid on the opportunities offered either to plan a new community or to add to an existing one in a satisfactory manner; it discourages new housing on small sites unrelated to existing towns and villages, and urges a close integration giving a sense of community in both new schemes and the redevelopment of old and decaying property. In a comment on peripheral development in the larger boroughs, it is noted that this has become exaggerated in one direction, ribboning into the country, with resulting loss of compactness and convenience which might otherwise have been obtained by more skilful selection of sites. Local authority boundaries should not, it is laid down, dictate the distribution of houses to the detriment of community planning.

This axiom is of especial importance in the provision of adequate open spaces; in the Glasgow area the deficiency in these has made the problem very acute. In the cases of Clydebank and Rutherglen, building has already fused a neighbouring town with the city of Glasgow, but in others, such as Paisley, ribbon development is at present the only link; the report is adverse to the closing up of such remaining wedges and strips of open space where there still remains a reasonable chance of planning a continuous green belt or "cut-off."

In view of the numerous busy traffic routes intersecting the region, the planning of residential groups with their various communal provisions must be located in areas not cut up by the main arterials, so that the functions linked with home can be carried on in comfort and safety. In the term used in the report, a neighbourhood should, for the satisfaction of daily wants, be "inward-looking," this idea being similar to that for which the term "precinct" has been employed. In some cases, owing to the location of centres in narrow valleys, planning on these lines will not be easy, but all the same it must be achieved. An example of peculiar interest is that occurring in the case of Port Glasgow just east of Greenock, where the only area available for housing development is the Boglestane plateau to the south, which is completely separated from the existing town by a steep cliff. It is suggested that this area should be developed for some 8,000 to 10,000 people with a small industrial section for local employment, and the usual provisions, combined with special mechanical facilities for quick access between it and the lower town.

It is gratifying to note that more consideration is demanded for the siting and grouping of the new housing in relation to the notable features in the landscape of this region. Though less dramatic in its character than the Highlands, the region has many striking viewpoints and there are instances in which ill-considered development might affect these. It is indicated that special attention should be given to this aspect of the plan.

An appeal is also made to the authorities that "every step possible should be taken to ensure that the material rise in housing standards will be accompanied by a corresponding improvement in architectural design and amenities. If our people deserve the best in plumbing and house-room, surely they also merit the highest level attainable by architectural skill in site planning and in the detailed design of buildings." This should be kept in view both in public and private undertakings, and the release of land for building made subject to the acceptance of such standards.

NOTES AND NEWS

Architects and London Damage.

ARCHITECTS are not being fully used in the emergency work of repairing London houses. This fact has been reported to the Council of the Royal Institute of British Architects, who wished to know what had been the result of their offer of help made some time ago to Sir Malcolm Trustram Eve, Chairman of the War Damage Commission, who is directing the organisation of this work.

This offer was made at an early stage of the emergency when the urgent need for proper organisation of repair work was being discussed. The Council of the Royal Institute had prepared a list of 140 London architects who were available for examining houses and directing repair work. It was pointed out to Sir Malcolm Trustram Eve that economy of labour and materials would result if practising architects were engaged to organise definite programmes of repair work and that the services of architects would be of special help in connection with more serious structural repairs to houses and their reconditioning. A scheme for organising this work on the basis of a systematic survey was outlined to Sir Malcolm.

The Council were informed that these offers of help had been conveyed by Sir Malcolm to the local authorities in the London area who are responsible for the work in their respective localities. The Council have now been told that on the evidence in the possession of the Institute it is correct to say that only in a small number of cases have local authorities availed themselves of the services of architects in private practice.

Factory-Made Houses: Siting.

THE services of members of the R.I.B.A. and its Allied Societies have been offered to the Minister of Health in assisting local authorities with the work of preparing layouts of the sites for the emergency factory-made houses. Lists of firms in all parts of the country willing to undertake such work have been compiled, and the Practice Committee of the R.I.B.A. have been requested to prepare a suitable scale of fees.

Roads in Britain and U.S.A.

No subject is more frequently talked about by technical institutions, transport associations and the bodies representative of commerce, industry and social welfare throughout the country than the inadequacy of our road system. Their demands for more and better roads have been persistent and vociferous for the last 25 years. In a statement Mr. Wallace Riche, general secretary of the Roads Improvement Association, says that it is reliably estimated that the inadequacy of our road system is costing £1,000,000 a week in loss of life and injury from road accidents and wasted time of men and transport from congestion. "The crux of the road problem," he states, "is finance. Primarily the funds allocated have been too little and, secondly, and more important, Treasury control prevented most of the earmarked money being spent upon road betterment and diverted it to other purposes. The Roads Improvement Association recommends a ten-year programme to remodel and modernise our road system in accordance with a prearranged master plan. The proposals have expert approval and have been under consideration by the Minister of War Transport since last December." The programme envisages the construction of about 1,000 miles of new roads of varying types, all of which, Mr. Riche states, can be achieved, together with regular and remunerative employment for semi-skilled and unskilled labour, "by the disbursement for a period of ten years of £20,000,000 annually over the pre-war road expenditure. The Ministry of War Transport has informed the Roads Improvement Association that a master plan is being prepared, but there are no signs of it yet—and victory is on the horizon!"

How U.S.A. is Going to Work.

IN view of the situation outlined, it is the more interesting to observe the plans for the post-war highway improvements planned in the U.S.A. These plans are for a greatly improved and expanded highway network which will be needed throughout the country. In addition to the overhaul of the 5,352,800 kilometres of roads in the U.S.A., a huge long-range plan for national super-highways has been approved by President Roosevelt which would provide 54,000 kilometres of new roads, largely in four different east-west trans-continental routes and seven north-south channels. All told, anticipated post-war construction in the United States is expected to cost at least $1,300,000,000 (or £260 millions) in each of the first three years following the end of the war. Both houses of the Congress have pending Bills to appropriate funds for roadwork, and action is expected on them soon after Congress resumes sessions following its present election recess. An important factor in this U.S.A. post-war highway planning is the opportunities it will offer. Already enough work is in sight to provide jobs for 50,000 men—in a field where virtually no one is now working.

B.S.I.: Lord Woolton Elected President.

AT the annual meeting of the British Standards Institution on October 17, the Right Hon. Lord Woolton, C.H., P.C., was elected President of the Institution, and Sir Percy Ashley, K.C.B., C.B., was elected Vice-President. Sir William Larke, K.B.E., succeeded Sir Percy Ashley as Chairman of the General Council.

Sir Percy Ashley concluded his term of office as Chairman of the General Council with a brief review of the work done as a direct aid to the war effort by the British Standards Institution. Industrial standards, providing for accurate and precise trade descriptions, methods of sampling and testing, and standards of performance, were (he said) likely to be increasingly desirable. If they were to meet the general acceptance they must be prepared and promulgated by either a Government Department or an independent body—independent in that it was set up and maintained by the national industry as a whole, with Government support but not under Government control. Such an organisation had been built up during 40 years in the British Standards Institution.

Buckingham Housing Schemes.

BUCKINGHAM Rural District Council propose to employ a qualified architect in connection with their post-war housing schemes. He will be required to prepare house plans, specifications, etc., and to advise the Council generally in connection with their housing proposals. Remuneration will be on a fee basis as may be agreed. Applicants should send their names not later than November 13, giving particulars of qualifications, experience, etc., to Mr. E. H. Floyd, Clerk of the Council, Council Offices, School-lane, Buckingham.

Builders' Part in the Peace.

A PLEA for deep and stable foundations in our plans for reconstruction was made by Mr. H. C. Harland, President of the London Master Builders' Association, at a meeting of the Rotary Club of London last week. Mr. W. E. Rice, President of the Club and immediate Past President of the London Master Builders' Association, presided.

"I am a builder," said Mr. Harland. "In our various ways we are all builders. What an opportunity lies before us. But while no building ever goes up without a plan, so none is ever erected without toil and sweat, and it may be blood and tears.

"If after the war we work as we never worked before, if everyone does a bit more than his best, then we shall have the benefits which Acts of Parliament seek to give in advance. Failing this, all the hopes of men for a better future are doomed to disappointment and our dreams will disappear with the dawn.

"The Atlantic Charter set out the aims for which the Allies are fighting. When peace comes we want a decent life for all, and we can have it if we will. It would indeed be a Utopia if in all countries there were a contented and happy people, founded on true righteousness, with plenty of work, comfortable homes, sufficient leisure, enough food, without industrial strife, and with freedom from anxiety and care and the unnecessary burdens of life.

"Let us get on with the job now. Let us do a full day's work for an honest day's pay. Then we are starting right, and we shall see in our lifetime our aims and plans come home."

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COMING EVENTS

Saturday, November 4.

INSTITUTE OF QUANTITY SURVEYORS. Mr. J. Holt on "Glass Manufacture." White Horse Hotel, Birmingham. 2.45 p.m.

Monday, November 6.

SOCIETY OF ENGINEERS. Mr. W. R. Gray on "X-rays and the Engineer." Geological Society's Rooms, Burlington House, W.1. 5 p.m. (tea at 4.30 p.m.).

Tuesday, November 7.

HOUSING CENTRE. Dr. R. F. Sudell on "The Garden." 13, Suffolk-street, S.W.1. 1.15 p.m. (buffet lunch, 12.45 p.m.).

INSTITUTION OF CIVIL ENGINEERS. Mr. F. E. Wentworth-Shields delivers Presidential Address. Great George-street, S.W.1. 5.30 p.m.

Wednesday, November 8.

ROYAL SOCIETY OF ARTS. Mr. A. C. Bossom, M.P., F.R.I.B.A., on "Prefabrication and Good Design." John Adam-street, W.C.2. 1.45 p.m. (sandwich lunch, 1 p.m.).

From *The Builder* of 1844

Saturday, November 2, 1844. *Price* 3*d.*

ERRATUM.—In our last number, at page 542, the Rev. Mr. Kyrle is called the "jealous" instead of the zealous member of the Antiquarian Society.

CITY, TOWN, AND VILLAGE DEFINITIONS

BY H. V. MOLESWORTH ROBERTS.

At this time, when questions of town and country planning and of reform of local government are being actively debated, accurate definitions are becoming more than ever necessary. On the one hand, the official status-names, "municipal borough" and the like, suffice to define the individual units, but less technical and more sweeping words like "town" and "village" are still needed for comprehensive purposes, and therefore need relating to the former type. With the very full and instructive aid of the Oxford English Dictionary (edited by Dr. James Murray), obviously the chief authority but not easily within the reach of all, the following summary of the position—as brief as is consistent with accuracy—may be attempted.

As a test, a rough comparison has been made between the stolidly propounded facts marshalled in the *Municipal Year Book* (1942 and 1944) and the generally accepted phraseology exemplified by the attractively-presented text and illustrations in Clive Rouse's *Old Towns of England*. It may be mentioned that in the *Year Book*, cities, county boroughs and municipal boroughs are grouped in one alphabet under the thumb-indexed section "Municipal Corporations," and that the convenient though very inaccurate tabulated summary occurring at the beginning of that section in the 1942 edition has been omitted from the 1944 issue. All kinds of perplexities arise as soon as a detailed analysis is attempted, *e.g.*, Worcester is formally stated in the *M.Y.B.* to be a county borough but referred to as a city. The conclusions derived are interesting. The surprising facts emerge, for instance, that "cities" do not all possess cathedrals, and, conversely, that towns with cathedrals are not all cities, or even boroughs!—Ely, for instance, is an urban district. Again, many so-called "towns" have no independent recognition, being mere items in rural districts (see below).

The status-names and popular words may first be roughly tabulated (next cols.).

The individual and also the comparative or demarcating definitions now follow in the same order. It is assumed that the status-terms need no definition, as they are statutorily fixed. Etymologies and historical causes are ignored, except as far as necessary to explain ambiguous definitions.

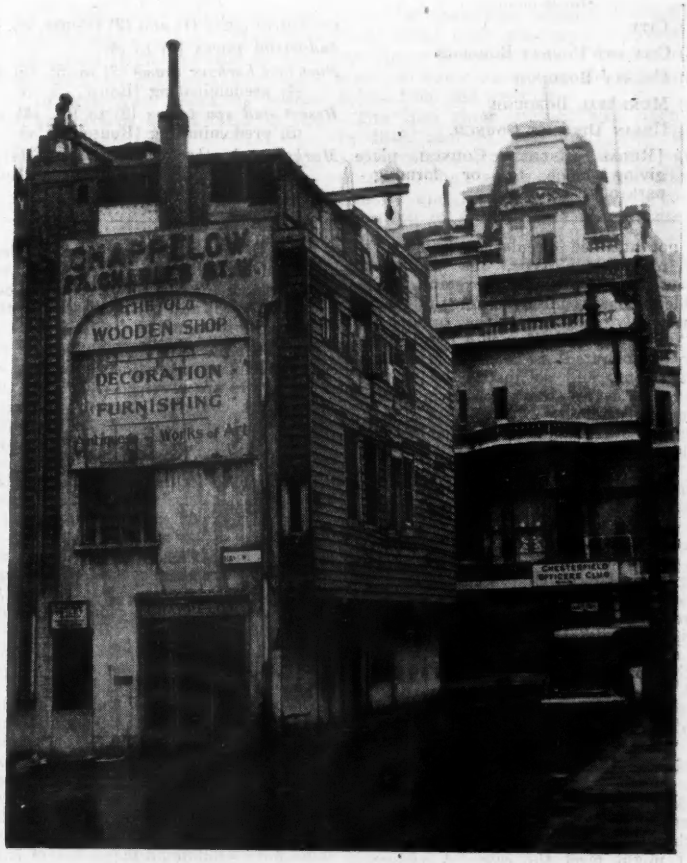
A CITY is "a town of higher rank" (*O.E.D.*, "Town," defn. 4) or "a title ranking above that of" TOWN ("City," defn. 2); but the term was early "used vaguely . . . of ancient . . . places of note, as capitals, or the like" (defn. 2b)—an amusing conclusion contrasted with popular impressions! There were historical causes for this. In early mediæval times it was "the chief borough or city of a diocese" to which episcopal sees were removed, hence the "notion of identification," but there is "no necessary connection of a 'city' with a 'cathedral town'"; since the sixteenth century the title was often one "created" for an existing town, and similarly in modern times "conferred by royal authority" on a "large and important borough," the honour of being the first falling to Birmingham (*O.E.D.*, "City," etymology). Salford (Manchester's smaller twin) is a recent example, 1926 (*Y.B.*). The distinction between "city" and "town," presumably corresponding to the Latin "civis" (originally = "citizenship") and "urbs," no longer exists in the Romanic and never has in the Teutonic languages (*O.E.D.*, note following etymology). Apart from the existence of the title in each individual case, therefore, no sharp line between "city" and "town other than a city" can be drawn. It is "a special type of borough . . . upon which the King has conferred the dignity. . . . It does not add any functions to or improve its status" (Clarke, *The Local Government of the United Kingdom*, 1939, p. 192), and "of historical and ceremonial rather than administrative significance" (Whitaker, *Almanack*, 1943, p. 607).

Status-names.	*Popular Words.*
CITY City and County Borough	*City.*
COUNTY BOROUGH N.B.—A city, and sometimes a municipal borough (*e.g.*, Poole), is often a county in itself, but this fact is irrelevant. MUNICIPAL BOROUGH N.B.—"Metropolitan borough," in County of London, is outside this study.	*Town;* *market town,* *country town;* *port or harbour town, etc.*
URBAN DISTRICT COUNCIL [RURAL DISTRICT COUNCIL—place forming part of]	*Village.*

As an instance of local status varying from that applying to a wider area, it is notable that Oakham, Rutland—a county town, however small the county—is only an urban district. The size element is evidently here operative.

A TOWN—the term apparently most broadly used and therefore most at issue—may be "a 'borough,' i.e., a corporate town, a 'city,' . . . an 'urban district,'" . . . or a "small inhabited place" (as below described) (*O.E.D.*, "Town," defn. 4).

At the upper end of the scale it is inclusive of CITY and therefore of capitals, episcopal sees, and so on, as already shown. At the lower end, however, it is larger and with a less simple organisation than a VILLAGE (*O.E.D.*, "Village," defn. 1), or "larger and more regularly built than a village and having more regular and independent local government"



A WOODEN BUILDING NEAR PICCADILLY.

Through all the Nazis' efforts to burn London to the ground this four-storey wooden building situated at the corner of Waverton-street and Charles-street, only a few hundred yards from Piccadilly, still stands unscathed. It is occupied by a firm of dealers in antique furniture and works of art.

("Town," defn. 4); the term is "sometimes also applied" (here comes the rub!) "to small inhabited places below the rank of an 'urban district' which are not distinguishable from villages otherwise, perhaps" [*sic*], "than by having a periodical market or fair ('market town') or by being historically 'towns'"; this distinction is, moreover, admitted to be "somewhat indefinite," and "there are also decayed towns" (not defined), "even municipal boroughs, which are surpassed in population by many villages." This shading-off of so-called "towns" below "urban district" status is borne out by the fact that out of, *e.g.*, the "market and country towns" illustrated in *Old Towns of England*, a number are missing from the Urban district list; a few (Amersham and Tetbury) of those distinctively styled "market towns," and one (Northleach) of the "country towns" not readily so identifiable, give their names to rural districts only; but there are others which are ominously absent from the *Year Book* altogether, doubtless because they occur as subordinate places in R.D.s, named after larger ones. One "market" town (Chipping Campden) and three "country" towns (Lechlade, Steyning and Thaxted) are thus contemptuously, if tacitly, "de-graded."*

Whether these are, in face of these facts, to be regarded as non-"urban" and therefore not "towns" at all is a question; but the term "market village" has not attained circulation, and so, in this recognisable type, the traditional phrase must presumably stand. The problem remains unsolved for the others, whose only remedy to the humiliation of "villagisation" (if such a hybrid term may be tolerated) is to seek urban district status, and so justify by statute, after the event, the status which they claim by custom!

On the other hand, out of the 16 towns dealt with in Elsie M. Lang's "Old English Towns" (2nd series, c. 1910), none is in a Rural and one only in an Urban District, and the rest are in boroughs of one kind or another.

A "Township" historically more or less coincided with a parish (Clarke, p. 159). An URBAN DISTRICT, "a non-corporate town having . . . powers . . . more extensive than those possessed by a parish council" (*O.E.D.*, "Town," defn. 4), may be regarded as a "town" explicitly so named.

A VILLAGE, in addition to the distinctions described, is "a centre of habitation in a country district" (*O.E.D.*, defn. 1); this appears to be a question-begging distinction, as every town or city is an encroachment on, and surrounded at greater or less distance by, a rural region; "immediately surrounded by and partaking of the nature of" a country district might meet the case. A village is situate in a Rural District, but usually does not give its name to it.

There is the further complication, arising from growth, where a one-time village survives, with its mediæval character, while a town grows up round it, which may be an urban district (as at Carshalton, Surrey) or borough; or the larger corporation may include more than one such centre (as at Beddington and Wallington, Surrey). Both terms must be retained and used in conjunction in these cases.

With the distinction between a VILLAGE and HAMLET we are not concerned, save to say in passing that a village is generally held to be the oldest or chief settlement in a parish, and therefore contains the parish church, which the hamlet does not; it is "a village without a church, included in the parish belonging to another village" (*O.E.D.*, "Hamlet"); to define a village as "larger than a hamlet" (*O.E.D.*, "Village," defn. 1) seems not functionally correct, though in practice it probably nearly always is so. An inn may be to some a more conspicuous feature of a village, but disappointingly carries no status!

Planning, non-governmental notions such as "built-up areas" and "conurbations" are obvious, or may be left to planning experts.

When—to sum up—one comes to relate the popular terms for various kinds of towns, classified by function, one arrives at the following rough analysis, based chiefly on those chosen for illustration in Rouse's work :—

Status-names.	*Popular Words.*
(1) CITY	*Cathedral cities* (1) and (2) (Rouse, ch. ii.)
(2) CITY AND COUNTY BOROUGH	*Industrial towns* (1) to (4)
(3) COUNTY BOROUGH	*Port and harbour towns* (2) to (5), (3) and (4) predominating (Rouse, ch. iv)
(4) MUNICIPAL BOROUGH	*Resort and spa towns* (2) to (5), (4) and (5) predominating (Rouse, ch. v)
(5) URBAN DISTRICT COUNCIL	*Market and other country towns* (4) to (6), (4) and (5) predominating (Rouse ch. iii)
(6) [RURAL DISTRICT COUNCIL—place giving name to, or forming part of]	

If fresh groupings are thought desirable under new terms, "Greater towns" is suggested for (1) to (4) and "Lesser towns" for (5) and (6). These adjectives would not, unlike "larger" or "smaller," necessarily connote size.

In conclusion, three more or less distinct factors are involved: (1) That titles historically conferred have to be recognised, whether they can be reasonably comprehended under general definitions or not; the created "cities" and "inhabited places . . . distinguishable from villages . . . by being historically 'towns,'" cited above, are examples. Moreover, historical growth must be allowed for, since what originated as a manor developed into a village, town, and city; "Our village is a town. And still it grows. . . . They put 'city' after our village's name. . . . Here is no city. It is . . . swamped by an industrial camp" (*Our Inheritance*, Architectural Press, opp. n. 43). (2) That status is not as clearly defined on a straight "ladder" as one might imagine, and crystallisation seems desirable. (3) That size, resulting chiefly from economic causes, though influencing the result in matters like small county towns remaining urban districts, is not dominant, though among official categories a town to be a County Borough must have a minimum population of 75,000, or to be a Municipal Borough a minimum in practice of 20,000 (Clarke, pp. 190, 179-80); if it were made so the old divisions might have to be swept away; but sizes would no more remain static or relatively constant than in the past.

*It has not been practicable to ascertain the historic origin of each, *e.g.*, the conferment of a charter or otherwise.

THE GEORGIAN GROUP

THE ANNUAL MEETING.

LORD CRANBORNE, Secretary of State for Dominion Affairs, speaking at the annual meeting of the Georgian Group, at Vintners' Hall, E.C.4, on October 16, said that if the Georgian Group was needed before the war, how much more was it needed to-day? It would be a great mistake, Lord Cranborne said, to assume that there were no further perils facing Georgian architecture.

"Not the least among them, I am afraid, are local authorities. I do not say that in any spirit of criticism of local authorities as such, but one of the blind spots in many, if by no means all, of them is a lack of appreciation of the beauties of architecture. Some of them are capable of sweeping away the most lovely houses if they consider they stand in the way of new planning schemes, or if, alternatively, they think that their replacement is likely to increase the rateable value of the area." He feared that the term "obsolescent areas" in the Town and Country Planning Bill might be used by a certain type of local authority as an excuse to do away with many buildings of great architectural merit.

Local authorities were not the only sinners. There was also the private owner, anxious to turn an honest penny. Here was a danger likely to increase, for taxation was expected to continue very high and many people who owned old houses that they loved and would prefer to live in would not be able to afford to live in them any longer. Finally, there were some who were ambitious enough to think they could produce something very much better than the artists of the past. In that category they must put a number of people who really ought to know better.

Professor A. E. Richardson, R.A., occupied the chair.

The Annual Report.

A feature of the annual report which was presented at the meeting is a number of excellent photographs of Georgian work which has been adapted to useful modern purposes. There has been a reorganisation of the Committee (now called the Council) and a fresh statement made of the objects of the Group, the first of which is set down as the awakening of public interest in Georgian architecture and town planning. "England's heritage of Georgian architecture, however splendid it may be, cannot in the long run survive unless an important and organised section of the people of England are determined that it shall survive. . . . An England (the Report continues) of factory-made homes 'complete with every modern convenience' might constitute a brave new world, but it would not be the England we know—nor the England we want." The Report enters an energetic plea that the opportunity afforded by the new town planning legislation for getting the protection of architectural amenities rationalised and simplified shall not be lost. As a result of an amendment by Mr. E. H. Keeling, M.P. (Deputy-Chairman, Georgian Group), in the recent debate in the House, this object has largely been secured. The Report emphasises, however, that the Group does not stand opposed to the reconstruction and replanning of our towns, and, in fact, welcomes such planning as long as it is based on the concept of an orderly layout, even if it requires that some Georgian houses have to be demolished.

The Report is issued from 4, Hobart-place, S.W.1.

THE DESIGN OF DWELLINGS

SPEAKING at a conference on Town and Country Planning, organised by the Town and Country Planning Association, at Stretford, MISS JUDITH LEDEBOER, A.R.I.B.A., said that the design of dwellings to be built after the war had been the subject of a very large amount of interest. With the publication of the Report of the Sub-Committee of the Central Housing Advisory Committee to the Ministry of Health (Dudley Committee) a number of the points under discussion had been finalised, and definite standards of post-war building by local authorities had been recommended. These were generally embodied in the Housing Manual issued by the Ministry of Health and the Ministry of Works, and formed the basis of future local authority housing.

"The work of the Sub-Committee," said MISS LEDEBOER, "consisted mainly in finding what were the defects of housing before the war, and in recommending standards which would bring them up to date. These consist largely of various ways of arranging the ground floor living accommodation to suit the modern equipment now generally provided. The main point of interest is that it was found that the scullery attached to the kitchen-living-room where the cooking was done by range, was too small, once the practice evolved of cooking by gas and electric stoves. The scullery requires to be made larger into a proper working kitchen, or even into a dining-kitchen where the family can take some of their meals. To make space for the enlarged kitchen, the bathroom, with a separate w.c., is recommended to be upstairs. The report emphasises the need for cupboards and the equipment of the kitchen in proper sequence for use. A shed should also be built to the house from the beginning. In rural areas this shed should be larger than in urban areas.

"In the past the design of the layout of a housing estate was not sufficiently considered. An estate should contain a mixture of small and large houses; they need not all have the same gardens; they should be imaginatively grouped along the street; the density regulation of 12 to the acre was too rigidly interpreted. New density proposals are suggested which will allow for variety of size and type of houses, place for an open space, for the preservation of old trees and retention of areas for planting new ones. Moreover, development should not be considered merely as a group of houses on an estate but as a community, either attached to the older parts of the town or as a new community in itself, containing shops, schools, churches and other amenities properly related to industry. Furthermore, the development of local authority work should not go ahead without considering development likely to occur by private enterprise.

"Of the greatest importance is the need to secure good design in post-war work. Local authorities will wish to retain the services of architects and designers of knowledge and imagination, in order that their housing work may be of a first-class quality, so that the tenants will be proud to live in attractive surroundings."

Alderman W. Wardle, J.P., was in the chair.

Architects' Registration: Appeals Chairman.

The Lord Chancellor has appointed Mr. T. W. C. Carthew, K.C., to be chairman of the Tribunal of Appeal constituted under the Architects (Registration) Acts, in the place of the late Mr. J. H. Thorpe, K.C., who had resigned.

VIEW FROM PERMANENT WAY.

ARCHED FLYING SHORES

AN EARLY RAILWAY ENGINEERING FEAT

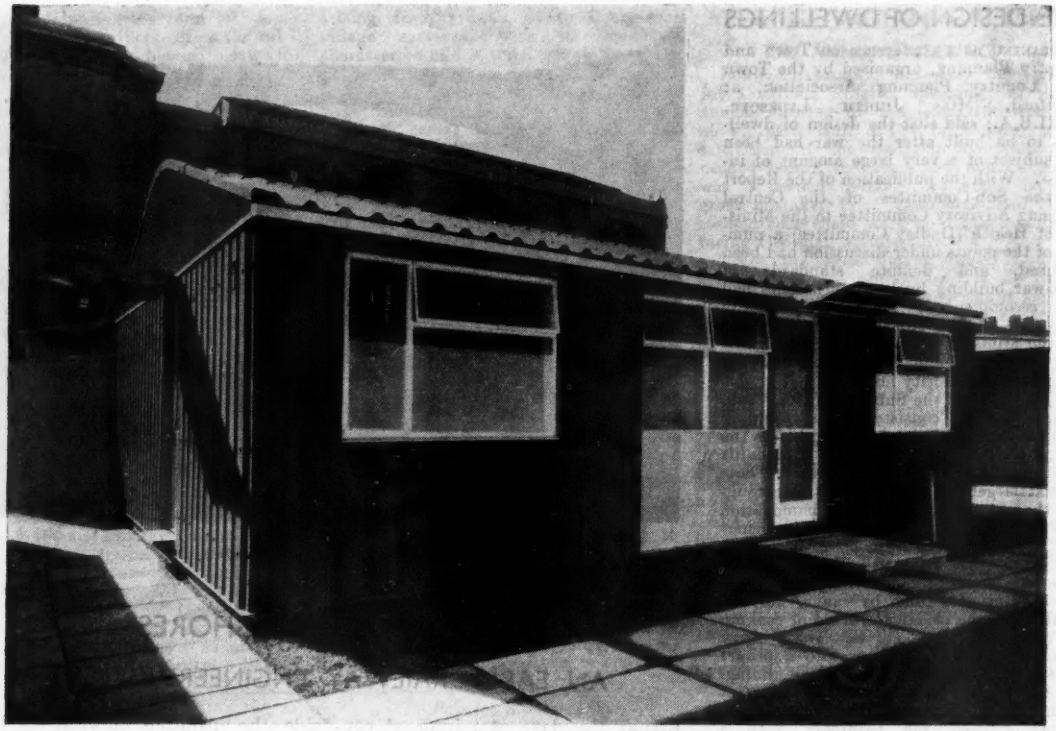
BEFORE the days of reinforced concrete, the railway engineer, when constructing a new stretch of line necessitating the cutting of tunnels, the building of bridges and retaining walls, showed perforce a lot of faith in the craft of the stonemason.

An unusual example of the mason's craft may be seen midway between Chorley and Euxton in "Chorley Cutting" on the Manchester-Blackpool line (writes Mr. A. E. Ellis). The 16 arches spring out from the buttresses of the retaining walls and have a spread of 26 ft. 9 in., the crown of the arches being built of 11 single stones, which continue their thrust through upper and lower voussoirs on either side, the spandrels between the latter being filled with masonry. Covering the single stone section of the arch is a slab of stone protecting the mortared joints from the weather.

The line they protect was opened in 1843, and so well built were the arches that during the 100 years of exposure to the rigours of the Lancashire climate and to the almost continuous vibration of a busy line the maintenance costs have been negligible.

The "arched flying shores," as they may be called, appear to be a unique form of railway engineering. In time to come future generations may revere the arches as a monument to yet another craft lost in antiquity.

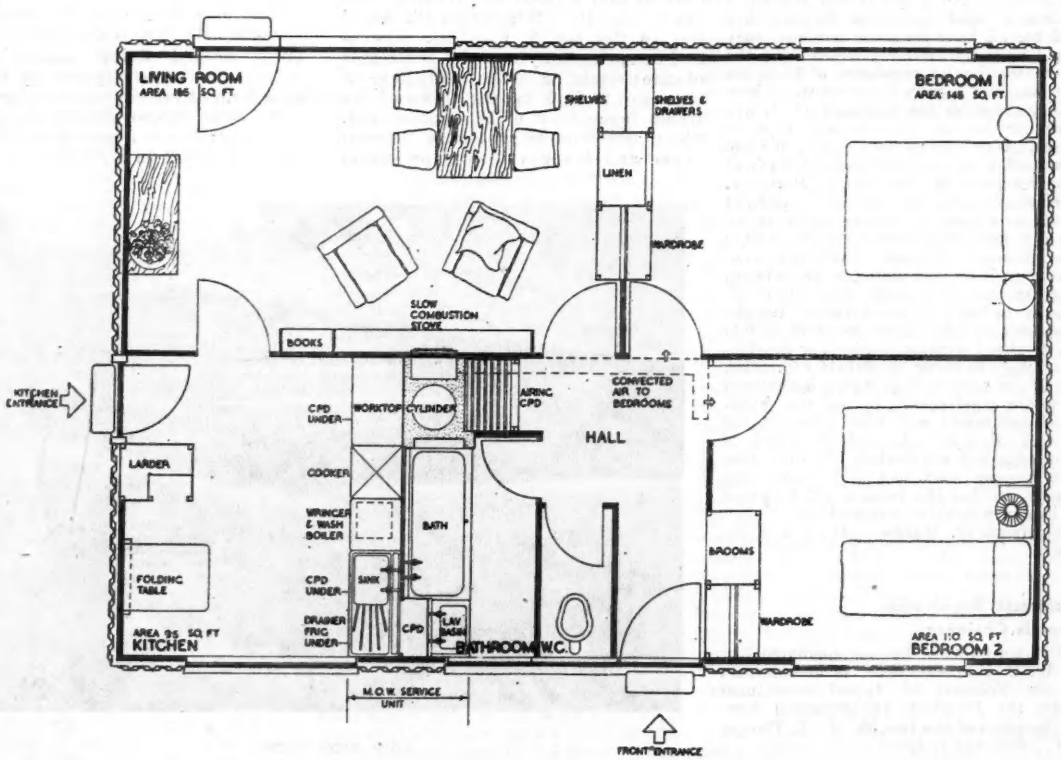
VIEW FROM ABOVE.



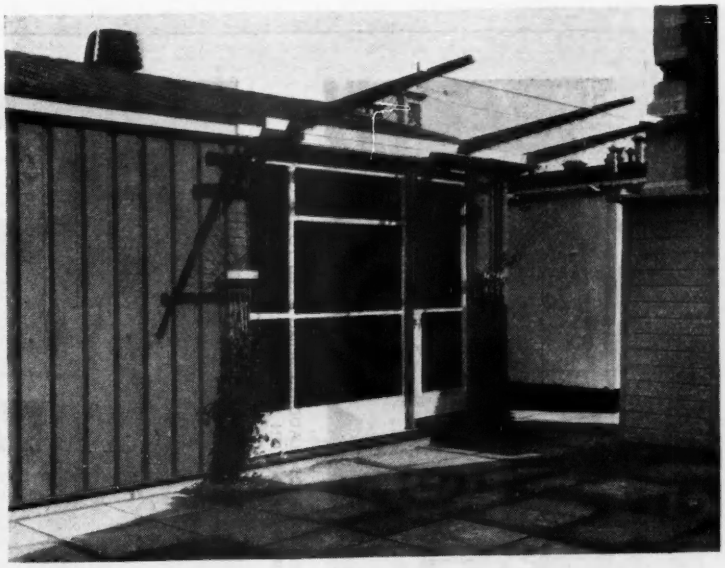
GENERAL VIEW SHOWING THE MAIN ENTRANCE.

THE "ARCON" MARK IV TEMPORARY HOUSE

ARCON, ARCHITECTS



THE "ARCON" MARK IV TEMPORARY HOUSE



DETAIL VIEW OF FRENCH WINDOW TO LIVING-ROOM.

THE SYSTEM.—Temporary House, Mark IV, developed by Arcon, Chartered Architects, represents a system of complete house construction, designed to fulfil a given set of requirements. It is not based upon an adaptation of all-purpose units for universal application. All components of the house are manufactured independently at various factories, for transmission, through a central agency, to the site at which the whole of the assembly takes place. Preliminary interchange of components between one factory and another, for sub-assembly, has been eliminated. A prototype house is erected on the Tate Gallery site, Millbank, S.W.

The Ministry of Works has placed an order (as reported in our last issue) for between 50,000 and 100,000 of these houses, to be put under construction immediately. Messrs. Taylor Woodrow Construction, Ltd., of Southall, have been appointed managing contractors and agents for the contract.

ASSEMBLY.—The assembly of the house does not call for the use of specialist or highly skilled labour. Numerous devices have been incorporated to ensure accuracy in levelling and alignment and to master the tolerances which are inevitable in all manufacturing and erecting processes. The house can be erected by the ordinary builder, employing semi-skilled general labour.

CONSTRUCTION. — The structure consists of a light steel frame of rolled sections with tubular steel roof trusses. The exterior is clad with a double layer of moulded asbestos cement sheeting, as also employed for the roof, but single layer only. The walls are lined with storey-height panels, 3 ft. wide, consisting of ⅜-in. plasterboard, backed by insulating material to the equivalent of ⅝-in. wood wool and bonded on to light timber frames. The thermal insulation value of this construction, it is claimed, is equal to that of an 11-in. cavity brick wall.

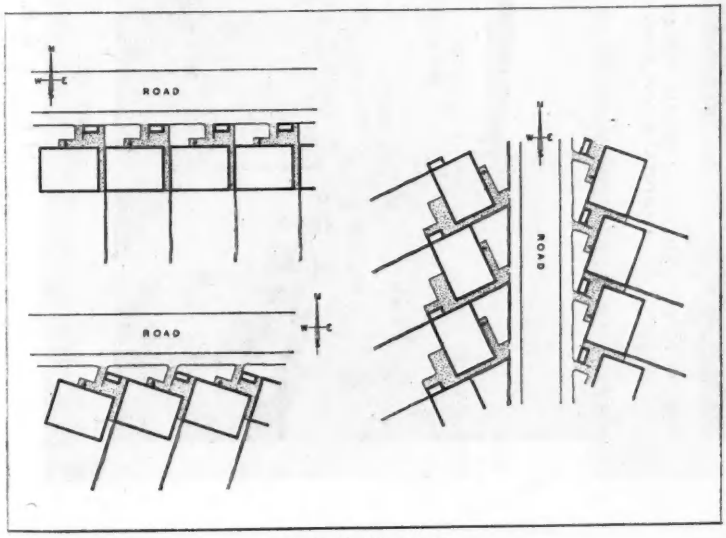
Internal partitions are in panels of similar dimensions and construction, but without insulating material and faced on both sides with plasterboard. Ceiling panels are formed with ⅜-in. fibre board, bonded to light wood frames which are suspended from the trusses and mutually located by a simple system of tee-section steel bearers. The floor comprises impregnated battens set in 1-in. cement screed on site concrete, the whole being covered with a layer of pitch and tar, to receive ⅞-in. T. & G. boarding.

DOORS, WINDOWS AND TRIMS.—Internal doors and frames are of wood. External doors and windows are steel, made up from standard "cottage" sections and set in steel linings. Skirting, picture-rails, etc., are of steel.

EQUIPMENT.—Kitchen fittings and appliances, furnishings and sanitary ware are those adopted as standard by the Ministry of Works. The M.o.W. "Service Unit" is incorporated.

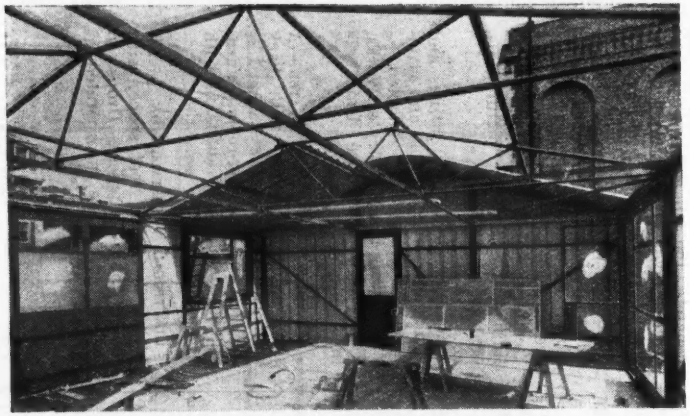
HEATING AND HOT WATER.—A slow-combustion stove, with back boiler and convector jacket, is installed in the living-room. Warm air is conveyed by ducts to both bedrooms.

ELECTRICAL INSTALLATION. — All wiring is in the roof space, with ceiling pull switches. Drops to sockets outlets are incorporated in the wall panels.

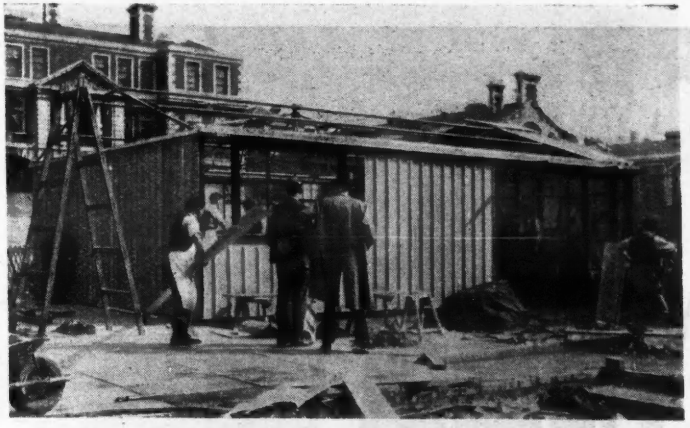


ALTERNATIVE SITINGS

ARCON, ARCHITECTS

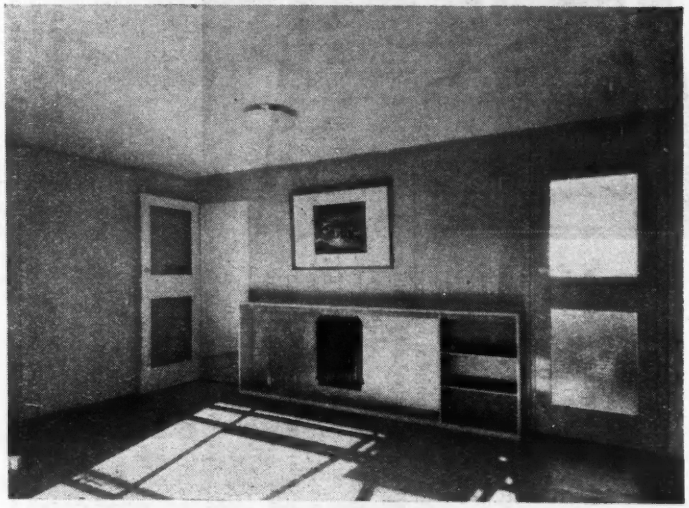


STEEL FRAME WITH TUBULAR TRUSSES AND PURLINS COMPLETED AND EXTERNAL ASBESTOS CLADDING BEING FIXED.



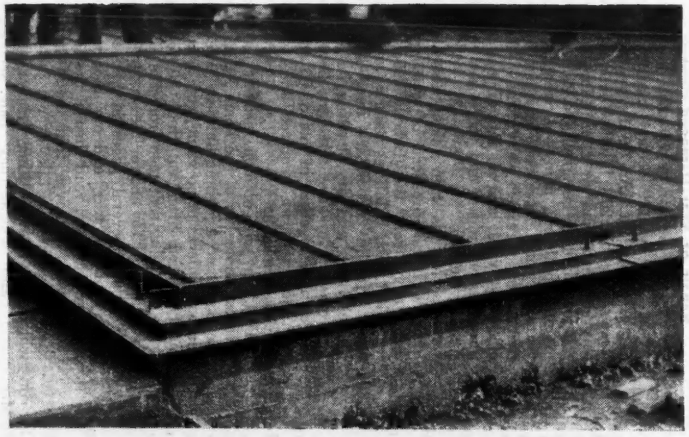
INNER LEAF OF DOUBLE ASBESTOS CLADDING BEING FIXED TO STEEL FRAMING. OUTER LEAF IS THEN FIXED WITH SEAM BOLTS TO THE INNER LEAF.

THE KITCHEN.

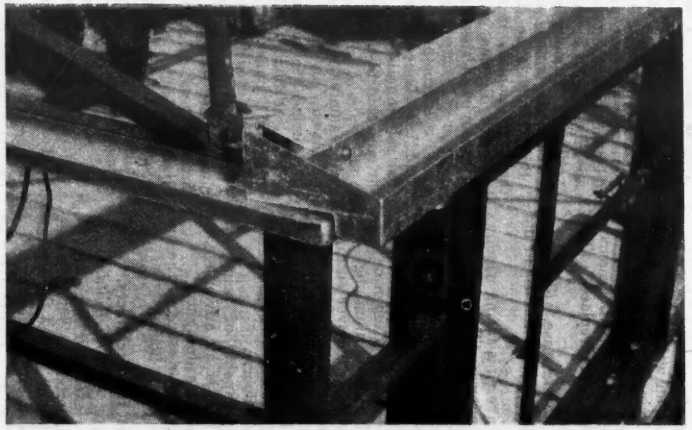


THE LIVING-ROOM.

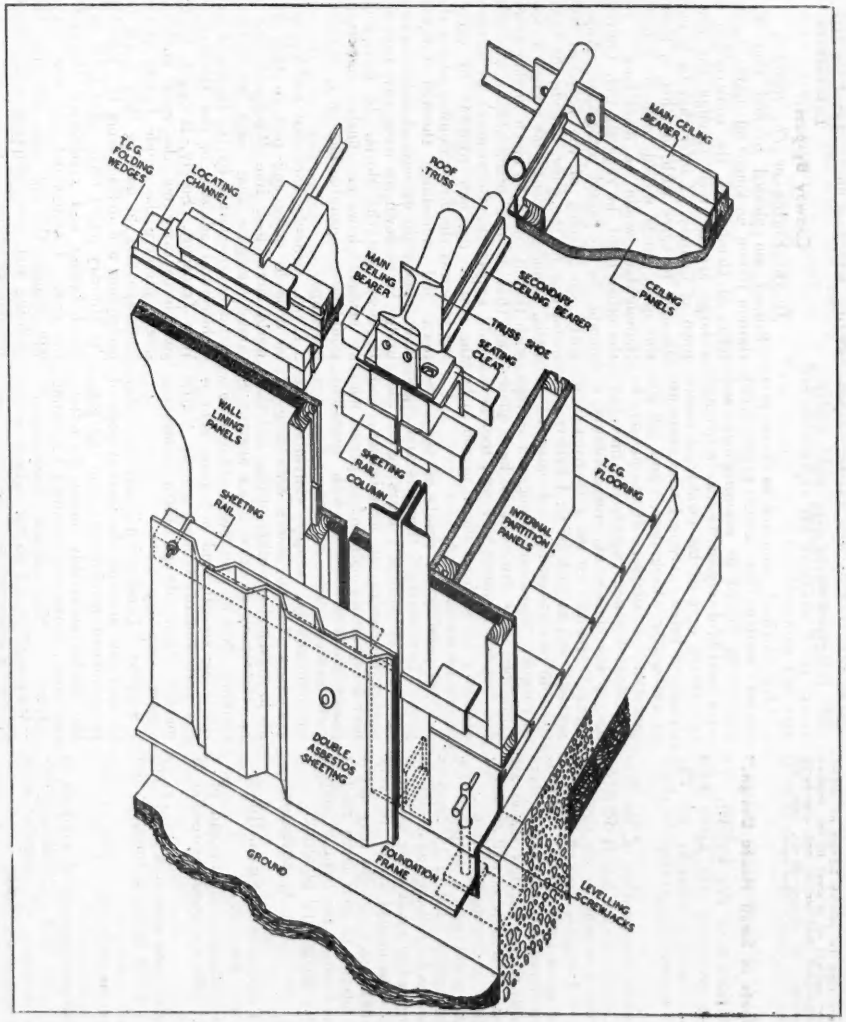
THE "ARCON" MARK IV TEMPORARY HOUSE



STEEL FOUNDATIONS IN FRAME, LEVELLED UP BY SCREW-JACKS AND CONCRETED IN.



DETAIL AT CORNER OF EAVES SHOWING COMBINED ZINC FLASHING AND GUTTER MEMBER.



THE "ARCON" MARK IV TEMPORARY HOUSE

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

"Some Defects in Small House Design."

To the Editor of *The Builder*.

Sir,—Most architects will agree with Mr. T. W. Bailey's remarks in *The Builder* for October 13 regarding the above matter.

Unfortunately the position of the fireplace is not studied as much as it deserves. In most houses it is opposite the doorway, is the cause of draughts, cools off the room quickly, and gives little fireside comfort. It is felt more nowadays with coal in short supply. Badly fitting window sashes are another source of trouble as well as doors, especially those in casement windows.

Over eight years ago I prepared for office use the enclosed list of 14 items as a rough guide to be followed as closely as possible in regard to small house design.

The points mentioned could be very much amplified, but I thought they might be of some interest to your many readers so as to get down to the basic principles of good house design and planning.

Liverpool, 2. D. A. Beveridge.

General Principles of Small House Design.

1. Square entrance hall instead of a narrow one. (Gives a good impression to callers.)
2. Front and back entrances should not be opposite. (This makes a draughty and cold house.)
3. Sunshine in as many rooms as possible.
4. Balanced arrangement of windows to front, ends and back. (Nothing looks worse than windows of irregular sizes popping up and down walls.)
5. All fireplaces to be on inside walls. (To avoid heat evaporation to outside and to retain heat in house and prevent freeze-up of cistern in roof space.)
6. No fireplaces on walls opposite entrance doors to living-room, dining-room or bedrooms. (To avoid draughts.)
7. Space for settee and two armchairs in front of living-room fireplace. (This speaks for itself.)
8. No winders to staircase. (They are dangerous, especially for children and old folk.)
9. No beds to have ends facing windows or to overlap windows. (To avoid light shining into face.)
10. All bedrooms to have windows on two sides, if possible, for cross-ventilation.)
11. Bath and w.c. over kitchen or scullery for convenience of plumbing, and face north or east. Never over entrance, dining-room, living-room or larder.
12. All soil-pipes well away from entrance door. (Both for appearance and gushing noise, which often happens when callers are at front door.)
13. A staircase capable of being curtained off from hall is an advantage, as staircase well-holes are draughty.
14. A radiator, fire or stove in the hall helps to heat the whole house.

"Vacancies for Architects."

To the Editor of *The Builder*.

Sir,—You have exercised commendable patience with "Lancastrian" by allowing him the privilege of thrice airing his views. In respect of his persistency I have wondered whether "Lancastrian" is *one* person or represents a *body of persons!* Will you permit me to appear just once again?

An injustice may have been committed against Mr. Howitt, who was not responsible for commencing this mild controversy, yet I welcomed his expressions of fact and opinion.

"Lancastrian" appears to have presented merely his own preconceived notions in regard to examinations, and with healthful vigour he has attempted to slay the ogre of his own vivid imagination. I believe it was I who made use of the words "back door," and my explanation is simple. If a person be appointed borough engineer he may have among his duties, the responsibility of being "Architect to the Education Committee," and as such he is, I believe, entitled to be registered as "Architect." Is this right? The borough engineer is thus "qualified" by law, but is he "qualified" as an architect? I ask, too, is it *necessary* for such an official person to be registered whatsoever?

From possibly all points of the compass, "Lancastrian" thunders and rages against examinations. Years ago I succeeded in passing an examination, and may I express my opinion? A person who passes an examination, with questions and problems selected at random and comprehensively, simply convinces the examiners that he knows *something* of his professional—or other—work, and that he *might* have received a fair amount of training. Not by any means are examinations the end-all, and any man who is the possessor of a modicum of "grey matter" can always learn something almost every day.

Suppose "Lancastrian" were one day to interview me with the fervent hope of being offered employment, the conversation might conceivably run on the following lines: "Are you qualified by examination?" "No," replies "Lancastrian." "Why not?" "I do not believe in nor hold with examinations," responds "Lancastrian." "Well, are you well used to your job?" "Certainly, sir," replies "Lancastrian," "I am a man of sound knowledge and great experience." "Indeed. Can you substantiate your assertion?" "Assuredly, sir," answers "Lancastrian," who is equipped with a bulky roll of drawings and a well-packed foolscap envelope, "I have with me three excellent testimonials which give me extreme pleasure in submitting to you." "But, man, do be consistent! Are not these testimonials, in a sense, the equivalent of a diploma in so far as you may have convinced three independent persons that you are competent, which is precisely what is accomplished by an examination?" "Lancastrian" should realise that self-appraisement will not carry him far, and that testimonials are often worthless.

An examination is, to my mind, a fine institution, an incentive and a means towards good solid hard work and concentration. Probably "Lancastrian," too, carries a "bunch of sour grapes" with him. As hinted in my opening paragraph, I *suspect* that "Lancastrian's" letters do not emanate from him solely. In the circumstances, I deal with him with frigid politeness, and ignore his personal references to gentlemen who may be better qualified than he by age, experience, *and examination!*

Unregistered "Architect."

To the Editor of *The Builder*.

Sir,—With reference to my letter on the above subject in last week's *Builder*, my penultimate paragraph should end ". . . total field of selection," and not as printed, "total filled by selection." I must apologise for my careless handwriting, which no doubt caused the error.

Lancastrian.

Conway By-pass,

To the Editor of *The Builder*.

Sir,—I am pleased to find that Mr. Gordon Hemm no longer advocates, in his letter of October 13, the construction of a large arterial road through the little town of Conway. I infer that he is now disposed to agree with me that to bisect this quiet, little walled town by a noisy thoroughfare would be disastrous. On the other hand, he suggests that Conway should be by-passed altogether. Apparently, the placing of the proposed new motor-way on the quay, outside the town walls, is not sufficiently far away. I, too, wish that it could be much further away, but that is not practicable. No one could expect the Government to increase the cost of the new roadway by carrying it across the River Conway above the town and tunnelling through Conway mountain, or the expense of making a new bridge lower down the river, say, between Deganwy and the Morfa. In fact, such a bridge, however finely conceived, would be a deplorable blot on a charming landscape.

I, too, earnestly hope that nothing will be done to make any part of this old-world town look like Blackpool, but I cannot imagine that such an opinion would be entertained by the technical and architectural advisers of the Ministry of War Transport. Surely, it ought to be possible to carry out the work unobtrusively, preserve the simple dignity of the landscape and do nothing that would be pretentious and detract from it. Possibly the Ministry might leave space for a wide floral border and greensward alongside the river. I understand that new quays will replace the old ones and that the yachting and other shipping will receive adequate provision.

John Swarbrick.

London, E.C.4.

Repair of War-Damaged Houses.

To the Editor of *The Builder*.

Sir,—We would second the opinion expressed by Mr. A. G. Reeve in your issue of October 20. Is it too late even at this eleventh hour to appeal for a little consideration to be given to established jobbing builders, many of whom, after years of work, have been enabled to get themselves together plant, transport, an office and yard, and all the various paraphernalia so dear and necessary to a jobbing builder?

Now with his men taken away from him, with no prospect of getting any more men from the Labour Exchange, he is left with liabilities hanging over his head, with his experience unneeded and himself high and dry, looking on at the newcomers who have somehow been able to get men together in lots of 30 and 40, with no overheads required and no liabilities to meet.

This, in our opinion, is one of the greatest anomalies of the home front, how the experienced jobbing builders have been thrown aside as of no value, and how new, inexperienced firms entering the jobbing trade are being sent men from the Labour Exchanges. To answer these questions will require several pages in any future history of the war, and our descendants will, we feel sure, read then of the several "diplomatic" moves that had enabled these newcomers to take over a job about which they knew nothing, or at most very little, and which they had seemingly despised for so many years previous to the war.

We, too, with Mr. Reeve, had hoped for

much from the newly-formed Federation at the beginning of the war. We, too, had always thought ourselves too small to join the L.M.B.A. and, with the coming of the Federation of Master Builders, hastened to join what we had thought would be *our* own organisation.

But here, too, as with all other matters during the past years, we soon learned our mistake. How long was it before the F.M.B. was in itself taken over by the larger firms, and now who is there to represent us, the small man with his four or five men left him, with his overheads and with his plant lying idle, who feels himself, and is made to feel even far more strongly, that he is as superfluous as coffee in Brazil, and that for the betterment of his country he, too, should be thrown into the sea?

P.p. EFFICIENCY BUILDERS, LTD.,
S. YUDKIN.

Kilburn, N.W.6.

A New Organisation of Builders.

TO THE EDITOR OF *The Builder*.

SIR,—On Thursday, October 19, at a meeting of master builders, an association was formed, to be known as the Greater London Master Maintenance Builders' Association.

Following a lengthy discussion, when a great many pertinent questions were asked, the following suggestions were forwarded to Sir Malcolm Trustram Eve to form a basis for discussion on the present problems relating to the repairs to bomb-damaged properties in London :

1. That builders are allowed to retain labour for maintenance purposes. Otherwise, a further problem will be created following bomb repairs.

2. That reinstatement jobs should be allocated to builders in accordance with their capacity, taking into consideration available plant, etc. Jobs costing £250 and under be carried out on an estimate principle. Specifications to be prepared by a qualified surveyor, who should be given authority to accept or reject estimates on behalf of the War Damage Commission. With this method smaller firms could retain their identity and adequate supervision be ensured.

3. That imported labour only be allocated to local authorities to carry out first-aid repairs.

4. House-owners should be encouraged to employ their own builders, thereby relieving the local authorities of a great load of work, and at the same time giving owners their legal rights under the Act.

5. Before payment is decided on, all difficulties should be taken into consideration. Quantity surveying as carried out at present includes the price system in accordance with measurement. In the case of reglazing, allowance should be made for the condition of glazing bars, etc. Also, whilst the large builders can buy at manufacturers' prices, smaller firms have to pay merchants' prices. On a normal quantity survey unfair advantage is given to the larger firms, thereby creating unnecessary friction.

6. A group of jobs costing £250 or under could be allocated to a qualified surveyor, who would act on behalf of the War Damage Commission, payment being made on his certificate.

JAMES BRENNAN,
Chairman and Organiser.

19, Great Western-road, W.9.

Addition to "Green Belt."

Subject to financial assistance from the L.C.C. and the Hertfordshire County Council, Hoddesdon U.D.C. proposes to buy for £27,000 Broxbourne golf course, near Hoddesdon.

SOLID FUEL INSTALLATIONS

A POST-WAR BUILDING STUDY.

THIS booklet on Solid Fuel Installations* is the twelfth so far issued in the series of twenty-two Post-War Building Studies embodying the views and recommendations of the committees set up under the ægis of the Ministry of Works and appointed either by a Government Department or by a professional institution, research association or trade federation, as seemed most appropriate in each case. The Solid Fuel Installations Committee was convened by the British Coal Utilisation Research Association, and its report has been awaited with particular interest, inasmuch as the subject is one which is of especial concern to everyone connected with house building and equipment.

It has long been evident that, in respect of technical efficiency, there were possibilities of great improvements in existing solid-fuel appliances for warming rooms, cooking and hot-water supply. This booklet indicates the lines on which developments might proceed with most hopeful results. The Committee's recommendations mainly concern standards of performance and design which can be incorporated in the immediate post-war periods. This is all to the good. At the same time the Committee point out that the full advantages of improved design of appliances cannot be achieved without considerable modification of present-day building technique and a long-term development of research; indeed, they say that "only if the building as a whole is regarded as a heat-using machine can heating and cooking appliances be designed which will give the fullest service for the lowest consumption of fuel." The present, however, is our immediate concern, and the Committee are fully alive to this fact. From tests which have been made, and others that are still in progress, they recommend a minimum thermal efficiency of 35 per cent. for open fires, as compared with a normal pre-war efficiency of about 25 per cent., and a possible achievement, at a later stage, of 45 per cent., or even higher, through increased use of convected heat. "By the increased use of insulation on cookers and hot-water systems it is possible to make a single fire supply a large part of the domestic heat requirements without the waste of fuel which has in the past so often been associated with the use of multiple-duty appliances." The Committee's main stress is on the principle of continuous-burning, thus achieving not only increased efficiency but also reduction of labour in the daily lighting of fires, and ash removal (which might be not oftener than once a week).

"The type of combined space-heater, cooker and water-heater envisaged for the immediate post-war years would probably consume on the average about 30 lb. of coal per day, which is only slightly less than the pre-war consumption of five tons per annum. This appliance would, however, be continuous burning and would thus provide space-heating and hot water at any time."

In the case of living-room heating, comparison is made between (1) a pre-war 16-in. stool-bottom grate, (2) an improved open fire with convection heating—both relit every day of the heating season (242 days), and (3) a space-heater with closeable open fire, continuous burning for 242 days. Between (1) and (2) there is an annual saving of £1 14s. 10d. in fuel alone, and between (1) and (3) a saving of £1 11s. 11d.

A further comparison is made between (1) a combination grate of the open-fire type, with side oven and back boiler, relit every day, with and without insulated hot-water tank and pipes, and (2) an improved combined unit with side oven and side boiler burning continuously, with closeable fire and insulated hot-water tank and pipes. The annual savings in fuel resulting from insulation of the hot-water tank and pipes are estimated to be £3 6s. with coal at £3 per ton, and £3 14s. 6d. additional saving from the use of the improved multiple-duty unit.

Appendices to the Report go into details of standards of performance, operating costs and installation. These are of interest, especially to designers and manufacturers of appliances.

Three other matters dealt with, as integral with the general study, are smoke abatement, the design of flues, and the introduction of a separate air supply close to the fire in order to minimise draughts while effecting the necessary changes of air in a room.

Regarding smoke abatement, reference is made to an experimental open fireplace of novel design at the Fuel Research Station, based on the principle of maintaining a high temperature over the fuel bed, capable of igniting the distillation gases, together with adequate mixing of air for their combustion. This has the fireback continued into a dome-shaped roof or canopy over the fire, the products of combustion escaping to the throat under the forward-facing lip of the dome. It has shown smoke reductions up to 25 per cent. during ignition periods, and up to more than 50 per cent. during refuelling periods.

* M. O. W. Post-War Building Studies: No. 10. H.M. Stationery Office, price 9d.

R.I.B.A.

MEMBERSHIP ELECTIONS.

ON July 4 and October 17 last the following members were elected :—

JULY 4, 1944.

AS ASSOCIATE (*Overseas*) (1) : John Elliott Emary, B.A.Arch. (Aliwal North, South Africa).

OCTOBER 17, 1944.

AS HON. FELLOW (1) : Sir Alfred James Munnings (Dedham, Essex).

AS FELLOWS (6) : W. Crabtree, Dip. Arch. (L'pool) (Tadworth, Surrey); J. R. Piggott (Lt.-Col. R.E.) (Stoke-on-Trent); R. Sheppard (London); and D. A. Wilkie (London). (*Overseas*) A. S. Hall (Melbourne, Australia); O. Weerasinghe, A.M.T.P.I., Dip.Arch. (L'pool) (Colombo, Ceylon).

AS ASSOCIATES (8) : R. C. Blair, B.Arch.(L'pool) (University of Liverpool) (Stoke-on-Trent); A. G. C. Brendon (Yelverton, S. Devon); L. M. Carroll, B.Arch. (N.U.I.) (University College, Dublin); J. R. Firth (Bristol); Miss N. F. Pickard, Dip.Arch.(Leeds) (Leeds School of Architecture) (Skipton, Yorks); and M. F. Tilley (Banbury, Oxon). (*Overseas*) E. D. Lyon (Melbourne, Australia); D. E. B. Martin, B.Arch. (University College, Auckland, N.Z.) (Wellington, N.Z.).

AS LICENTIATES (18) : C. G. Burgess (Wrexham); A. F. Cargill (Dumfries); E. P. W. Cooper, M.A.(Cantab.) (London); E. A. Devine (Newcastle-upon-Tyne); H. H. R. Dyer (Hastings); N. Halliwell (Blackpool); N. L. Jones (Dolgelley); A. S. Kemp (St. Austell, Cornwall); H. A. W. Knight (London); R. McNab (Glasgow); D. P. Marshall (Seven Kings, Essex); V. Ord (Gateshead); H. F. Riley (Birkenhead, Cheshire); H. T. Rushton (London); M. J. F. Secrett (London); C. Whittaker (Stoke-on-Trent); W. A. Wort, P.A.S.I. (London); and Capt. G. Wraith, R.E. (Doncaster, Yorks).

R.I.B.A. Informal General Meeting.

An informal general meeting will be held at the R.I.B.A. on Tuesday, November 14, at 5.30 p.m., when Mr. A. W. Kenyon, F.R.I.B.A., Chairman of the R.I.B.A. Central Planning Advisory Committee, will read a paper on "The National Plan."

DAYLIGHT IN DWELLINGS AND SCHOOLS

BRITISH STANDARD CODE OF PRACTICE

FROM A CORRESPONDENT.

A DRAFT of the Interim Code of Functional Requirements for Dwellings and Schools, 1(A) Daylight, stated to have been prepared by a committee formed under the ægis of the Ministry of Works, has been published by the British Standards Institution for comments receivable up to November 7.

This draft Code is directed solely to the control of fenestration. One of its appendices certainly strays somewhat into town planning problems, but the Code itself deals exclusively with windows. As a semi-official code of good practice, a term usually reserved for something which it is unprofessional and rather disgraceful to disregard, architects will from the outset be inclined to be prejudiced against it. Even if the great majority of new buildings may be in towns already overbuilt, all are not, and architects have no reason to doubt their professional ability to make full use of whatever conditions of guaranteed aspect are given to them by town planning restrictions on permissible obstruction.

Only if the Code exhibits the usual signs of careful and well-considered preparation will they be prepared to regard it as scientific guidance. If, on the other hand, it embodies what may seem to them to be obvious errors or deductions insufficiently justified by the available evidence, they may be inclined to resent it as an attempt to dictate to them with regard to an important branch of their work which they have hitherto been able to carry out with success and even distinction without professional assistance. If, therefore, architects are to treat the final form of this Code with respect, it is essential that the present draft should be criticised rigorously and fearlessly.

It is divided into two parts followed by three Appendices, A, B and C. Part 1 consists of tabulated lists of the penetration and area of "daylight factor" values specified as being the functional requirements of various interiors in dwellings and schools. Part 2 is a series of illustrated instructions to architects as to how such standards should be attained. Appendix A is entitled "The Design and Siting of Buildings as Factors in Daylighting." Appendix B describes a geometrical device for measuring daylight factor values by means of protractors. Appendix C consists of the graded tables of daylight factor values obtainable from single rectangular windows of various proportions, obstructed and unobstructed, recently published by the D.S.I.R.[1]

Recommended Standards.

Without quoting any authority for its decisions, Part 1 of the draft Code lays down in precise detail the degrees of amplitude in natural lighting which should, under good practice, be regarded as the functional requirements of post-war dwellings and schools.

It specifies for various rooms in dwellings, kitchens, sculleries, dining-rooms, bedrooms, staff rooms, halls, and, strangely enough, cloakrooms, standards which are many times greater than the minimum effective classroom lighting which obtains in such exceptionally favoured interiors as modern elementary school classrooms with large high windows facing open playgrounds. This was measured and recorded in 1914 by a technical committee of the Illuminating Engineering Society studying the natural lighting of schools.[2] The figure thus ascertained, 0.5 per cent. daylight factor, subsequently proved to be identical with Continental Government requirements for schools.

The draft now recommends for schools no less than 5 per cent. daylight factor, or ten times the only measured criterion on record of generous natural lighting. It recommends that this should, if necessary, be obtained by clerestory windows or skylights, which latter were at one time forbidden by the Board of Education. In situations where 5 per cent. is unobtainable, as in multi-storey schools, it recommends that 2 per cent., or four times the 1914 figure, be provided, reinforced by continuous artificial light.

This must be considered in connection with another draft Code in the same series, 1(B) Sunlight, issued last May. This fixed the functional requirements of school classrooms at one hour of afternoon sun at mid-winter involving aspects facing approximately south. For a like reason, it recommended that all kitchens, and, therefore, most larders, should also be planned to face approximately south. Excessive window glass entails, of course, unnecessary difficulty over cooling in summer, as well as unnecessary fuel for heating in winter.

Reinforcement by artificial light is also recommended in dwellings wherever the specified functional requirements in natural lighting are unobtainable. It is frankly admitted that the cost of supplementing deficiencies by artificial light "may be onerous in dwellings for persons of low or moderate income," a somewhat peculiar admission in a code of good practice which suggests, in a prefatory note, how its recommendations may be made mandatory.

Although no indication whatever is given in the draft as to how the Committee arrived at its standards of functional requirements for dwellings, it is reasonable to assume from a recent article in the Journal R.I.B.A. describing the activities of the National Social Survey, notably in lighting, that the figures are based mainly upon the results of inquiries made of housewives occupying obstructed urban flats. Experience in legal disputes over the effect of obstruction has indicated what appears to be a decided tendency for observers of natural lighting higher than mere adequacy—both occupants and casual observers presumably independent—to be misled by psychological prejudices of which they are wholly unconscious; and the psychology of vision under natural light is a field of research almost completely unexplored.

Before the present legal standard of daylight, just adequate for ordinary purposes (0.2 per cent. daylight factor), was first deduced in 1909, a large number of interiors, varying widely in character, were measured photometrically and observations in them noted.[3] After being tested by application to the varied circumstances of many legal disputes, the standard was accepted by the Courts,[4] but before it could be recommended in 1932 for adoption as an international standard a large number of offices, varying in dimensions, fenestration and obstruction were measured, and the recorded opinions, both of numerous experienced observers and of occupants of long standing, were collated and carefully analysed by the D.S.I.R. and the Office of Works.[5]

The investigations involved covered only a comparatively short range of daylight factor values over which, as far as is known, the eye is subject to no material prejudice. Observers could therefore be trusted to locate their personal "grumble points" with fair precision. Without further research, both physiological and psychological, similar precision can scarcely be expected with any certainty under higher ranges of amplitude over which the eye is known to be indifferent to large variations of photometric intensity, and probably to large differences in daylight factor values.

Investigation of functional requirements by means of inquiries may have been the only possible method under war conditions, and any recorded opinions would doubtless have been analysed with meticulous care. It is, however, open to reasonable doubt whether such opinions could have been sufficiently free from unconscious prejudice, or could have been analysed and "weighted" with sufficient material knowledge to justify the translation of the final results into dogmatic standards.

In the present state of our knowledge standards deduced from inquiries would have been more helpful in the form of suggestions to be tested by practical experience rather than specified as final or even recommended.

Methods of Obtaining Recommended Standards.

Part 2 of the draft Code obviously needs careful revision. Several of the suggested methods of achieving the recommended standards would be correct only within limits, in some cases narrow limits. For example, it is stated (p. 8) that all obstructions subtending 45 deg. or less at the centre of a window can safely be ignored. This, however, depends upon the shape of the interior lit, and it is fortunate that an accompanying illustration (Fig. 4) tends to suggest to any architect a case in which the lateral obstruction shown would obviously be material.

Another statement (p. 8) is that a single tree, unlike hedges, etc., cannot form a serious obstruction in winter. This clearly depends upon the relative dimensions of the tree trunk and branches and the window and their proximity. All trees also are not deciduous.

A further dangerous deduction from the particular to the general is the statement (p. 11) that the effect of the lateral obstruction of *all* projecting wings more than 12 ft. high above the window head and subtending 45 deg. or more at the centre of the window can be cured by

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adding just 25 per cent. to the width of the window on the side farthest from the obstruction.

Probably the most strange feature of this list of instructions consists of a number of rules (adduced as accurate but in reality very approximate) for applying the tabulated data in Appendix C to overhanging balconies or their equivalents in bays and dormers (pp. 12 and 13). According to the published N.P.L. version of Appendix C[1], the tables are specifically not applicable to such obstructions. Which is right?

The Design and Siting of Buildings as Factors in Daylighting.

Appendix A consists of a series of extracts from a lecture at the R.I.B.A. last year,[6] which dealt mainly with considerations arising in the preliminary stages of the preparation of town planning schemes. Judging from the illustrations, deductions very vital in town planning policy appear to be drawn from the effect of various degrees of permissible obstruction on the lighting, by vertical windows, of interiors at ground floor level only without regard to the effect upon upper floors. In crowded towns subject to site cover restrictions applicable to first and upper floors, the ground floors, at least of business premises, would probably be lit by top lights reinforced by artificial tube lighting.

Unless it is indicated how the subject-matter of this Appendix is germane to the objects of the Code proper, its inclusion is distracting.

Daylight Factor Protractors.

Appendix B relates to a statement in Part 2 that an architect who finds the data in Appendix C insufficient for any purpose—*e.g.*, school lighting—has the choice between two graphical "methods of analysis," viz.: (1) the Waldram measuring diagram, said to be described in the Journal R.I.B.A. of October, 1936; and (2) special protractors which are described and illustrated, obtainable from the Building Research Station.

There are, of course, other methods of analysis, from the well-known prototype of the Waldram diagram published nearly two centuries ago as the graphical form of Lambert's Cosine Law, to the valuable formulæ published last year by Mr. T. Smith, of the N.P.L., used, in fact, in the compilation of Appendix C.

No mention is made of the D.S.I.R. report on the penetration of daylight and sunlight into buildings,[7] in which the Waldram diagram is officially described with simple instructions by which any junior draughtsman can set it out, possibly because after two editions that report is again out of print.

Reference to the Journal R.I.B.A. of October, 1936, shows that Fig. 15, which purports to represent the Waldram diagram, really depicts a copyright web devised to allow for the very small loss of light in passage through a particular window glass. As this web is obviously far too complicated to be set out by any busy architect, this misdescription virtually awards a monopoly to the B.R.S. protractors. The statement that these were "developed" at the B.R.S. seems scarcely in accord with the record of their evolution in *The Builder* of August 2, 1940.

Standard Tables of Window Performance.

The N.P.L. tables of window performance on Appendix C apply to single windows not more than 6 ft. high and give only penetrations, widths and areas of the daylight factor values fixed by the Code for dwelling rooms, but not those for schools. Their field of application to practical problems in fenestration is in consequence limited.

A warning (p. 7) against counting twice over the overlap of contours from two or more windows overlooks the fact that multiple windows mutually reinforce each other, and do not result in the elliptical contours said to have been assumed in the compilation of the tables, which are thereby precluded from being applied to two or more windows.

Objection has already been taken in the technical Press that the tables give the effect of all horizontal obstructions extending laterally across the aspect of a window as identical if they all subtend the same vertical angle at the sill, whereas the effect of such angular obstructions at different distances can vary materially.

For example, the tables would not only attribute the same lighting value to identical windows on a first floor facing (*a*) a parapet 6 in. high above the sill at a distance of 6 in. with nothing material beyond, and (*b*) a ridge 6 ft. high and 6 ft. distant, but also to a similar window on the ground floor facing the horizontal skyline of buildings 60 ft. high above the sill along the opposite side of a street 60 ft. wide.

In the recent correspondence in *The Builder* evoked by this criticism it transpired that the trouble had obviously been caused by a desire to adhere to an old convention, presumed to be still current amongst architects, under which the effect of continuous horizontal obstructions was defined by the angle subtended at the window sill. The fallacy of this convention is pointed out in the D.S.I.R. report Technical Paper No. 7.

Correspondence revealed that an ingenious attempt had been made to keep the error involved within practical limits by assuming obstructions extending to virtually infinite distances, and therefore to virtually infinite heights. This further limited the applicability of the tables, and the absence of any mention of it in the published preface left their accuracy open to obvious criticism.

Happily, it has been possible to point out that the method of calculation adopted probably renders the tables applicable to angles of obstruction subtended at the window head. If they are so described in the final issue of the Code the error involved would be small and probably immaterial.

References.

[1] N.P.L. Graded Daylight Factor Tables, H.M.S.O.
[2] Report on Natural Lighting of Schools, Ill. Eng., July, 1914.
[3] A Standard of Daylight Illumination, Ill. Eng., July, 1909.
[4] Semon *v.* Bradford Corpn., 1922/2/Ch.
[5] D.S.I.R. Ill. Research. Tech. Paper No. 12, H.M.S.O.
[6] Journal R.I.B.A., February, 1943.
[7] D.S.I.R. Ill. Research. Tech. Paper No. 7 H.M.S.O.

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OBITUARY

Henry G. Gamble, F.R.I.B.A., J.P.

Mr. Henry Gilbert Gamble, whose death at the age of 77 took place on October 26, was one of the best-known architects in the Eastern Counties, having practised in Lincoln since 1897. Mr. Gamble was articled to Demaine and Brierley, of York, and to Mr. W. Watkins, F.R.I.B.A., of Lincoln, and after a period in the Westminster office of Somers Clarke and Micklethwaite (during which time he won the A.A. Essay Medal (1890) and the Arthur Cates Prize (1891)), he set up in practice in Lincoln in 1897, entering into partnership four years later with Wm. Scorer. During this association (which lasted until Scorer's retirement in 1913), the firm designed much work which included the public library, Gainsborough; Horncastle Grammar School and about 30 elementary schools for the County of Lindsey (for which Mr. Gamble was for many years architect to the Education Committee); a good deal of church restoration and several country houses, besides designing a monument and the altar rails of Lincoln Cathedral. After his partner's retirement, Mr. Gamble designed many elementary schools and the secondary schools at Scunthorpe, Boston, and Cleethorpes; Lindsey County Offices; Branston Sanatorium; the Gentlewomen's Homes at West Malling, Kent, and at Woodhall Spa; the Fourth Northern General Hospital, Lincoln; small-holding schemes for Lindsey and Kesteven County Councils; several war memorials; and much domestic, bank and commercial work. He had held the additional appointments of Surveyor to the Lincolnshire County Committee and to the governors of the London Hospital. He was a Justice of the Peace and a long-standing member of the A.A. and the Notts, Derby and Lincoln A.S.

W. S. Trent, F.R.I.B.A.

We regret to record the death, on October 22, of Mr. William Sydney Trent, F.R.I.B.A. The son of Mr. William Edward Trent, F.R.I.B.A., F.S.I., staff architect to Provincial Cinematograph Theatres, of New Gallery House, Regent-street, W.1, Mr. W. S. Trent helped his father in the design of many cinemas for this circuit. He was 41.

J. F. Bradford.

We regret to announce that Mr. J. F. Bradford, chairman and senior director of the building firm of H. Bradford and Sons, Ltd., of Dalston, E.C., died on October 18.

IN PARLIAMENT

Town and Country Planning Bill.

This Bill is now through the House of Commons and is being read a second time in the House of Lords this week. In the final stages of the Commons, the Government's new compensation proposals were accepted after a stiff debate. It is now certain that the Bill will receive the Royal Assent before the end of the session, which will be very soon.

Repairing Bombed London.

MR. WILLINK, the Minister of Health, in reply to a long and important debate in the Commons, gave details of what the Government are doing to repair the damage to fly-bombed London. He said that 120,000 houses had been brought to a reasonable state of comfort in the last four weeks. Eight hundred thousand were estimated in a count on September 22 to need attention before they were even reasonably comfortable. London and "Bomb Alley" had been given absolute priority over the whole country for the supply of material. Even before July 30 the Government had fixed their manpower figure—70,000—nearly twice what it was during the 1940-1941 bombing—and by September 12 the labour force had been built up from 24,000 to 61,000. Three Government Departments were concerned, and the difficulties were not so great as were sometimes supposed. Their responsibilities were rationally divided, and in each case special knowledge was required, so that amalgamation of the Departments would be of no advantage, and would result in considerable special difficulties. There was no jealousy or competition between the Departments.

"With regard to material, the following figures show what is being brought into London: 46,000,000 ft. of plaster board have been delivered since the fly-bombing attack began. Production has been increased from 2,000,000 sq. ft. a week in June to 4,000,000 to-day, and it could be 6,750,000 if only another 400 skilled men could be found for the factories. 27,000,000 ft. of other building board have been delivered. No fewer than 20,000,000 slates have been delivered in London. The rate of national production is under 1,000,000 a week and slate workers are scarce. The production of tiles has been increased three times over, and 46,000,000 have been delivered. 10,000 windows have been delivered of 100,000 on order of an interesting invention— a special emergency window, devised with one very large pane ready glazed in the factory and expandable to fit. Timber can be found if the programme is arranged three or four weeks ahead."

The total labour force needed Mr. Willink put at 140,000. He explained that the proper ratio had not yet been distributed out satisfactorily in each area and district job. Borough councils and contractors were urged to work out this balance.

He aimed now at securing a local balance of craftsmen to general labourers. In the blitz the proportion was not so important. But the fly-bomb caused a larger area of surface damage, and its repair required two craftsmen for every general labourer.

The Minister explained that a C(b) house was one which had been so badly damaged that although it could be repaired it was not desirable to do it urgently because, in the time it took, three or four other houses might be made habitable. Such a house was, in fact, uninhabitable but, for all that, it was very often inhabited. People were often reluctant to leave their home, even when it was in ruins. He laid it down that a C(b) house must be repaired if the people could not be offered alternative accommodation. But, if there was other accommodation, the C(b) house should not at the present time be repaired as it required a scale of work out of scale with other jobs. The average cost of repairing a house during the blitz of 1940-1941, was £45. The cost was smaller for the fly-bomb damage because of the higher number of slightly damaged properties in the total of the damage. They had before them this winter, he said, a task requiring between £30,000,000 and £35,000,000 worth of work. It had been suggested that it could be done before December 1. That was very far out. He put the date as April 1. Apart from repairs the local authorities had to find labour for erecting huts and for converting large houses, where possible, into flats. One reason why they did not put up more huts was that the asbestos Nissen hut took 750 man-hours for erection, and the average damaged house could be made reasonably comfortable for a very much smaller effort. No fewer than 80,000 people had been rehoused in requisitioned property. More could be done in this direction if it were not for the fact that people did not like leaving their own districts. For instance, Paddington had an experimental scheme by which they could house 1,140 people in 292 flats, and Islington was ready with such a plan if the people would move. The military authorities had released 475 requisitioned houses and would shortly turn over another 573.

MR. GEORGE HICKS, the Parliamentary Secretary to the Ministry of Works, gave details of the labour force available and used. He said that when the flying-bomb attacks began there were about 24,000 men employed in the London Civil Defence region on war damage repairs for local authorities. The arrears of previous war damage were at that time being overtaken. Arrangements were made for the transfer of workers to first-aid repairs, with the service and supply departments for closing down or postponing non-urgent contracts, provincial contractors and workers were brought into London to do repair work, specialist firms of slaters, tilers and glaziers were brought in from the provinces, the figure of unlicensed repair work allowed was reduced from £100 to £10. Small contracting firms were grouped, the Ministry of Works had a special first-aid and repair service, the Ministry of Labour directed men in London and the provinces to the work, N.F.S. men were put on the work. The result of those various arrangements was that the labour for repair work was built up from 24,000 to over 100,000. That included 32,000 men from the provinces and 33,000 transferred from other work in London, exclusive of the Services and the N.F.S. The estimated labour force in London to-day was about 132,000, which was about 40 per cent. of the total building industry of the country. The estimated number of craftsmen in London was about 85,000, or about half the total craftsmen of the country.

With a labour force of over 100,000, there was bound to be 7 or 8 per cent. of the men who did not fully realise the urgency or importance of the work they were doing. The charge of slacking was really breaking the hearts of the large number of men who had done their best in a difficult period. It was making them feel they were being branded. There were some people and a section of the Press—the Press were generally so good in the matter—who tried to find out the particular in order to illustrate the general. If a man had a grievance he could get in the news, and sometimes the truth was handled with considerable economy and the full truth not put forward.

The debate was initiated by MR. D. ROBERTSON, who said that it would be a mistake for the House to feel that this was a problem that must take months or even years. If it was tackled in the right way it could be done in much less time. They were told that there were 97,000 building operatives employed, and that probably another 20,000 would be needed; that although some materials were short, substitutes were being used, and that there was no idleness because of lack of materials. They were told that the man in charge was going round all the Ministries concerned—they appeared to be far too many—getting to know the Ministers and being well received by them, getting to know the senior officials and being well received by them, and even getting known at lower levels. A similar policy, he had been told, was being carried out in regard to the borough councils. There was not time for that kind of thing. This was a problem of intense urgency. They were told that the complete date was April, 1945. They might as well say April, 1950. This was a race between vital repairs and disease. Time was on the side of disease. If disease won the race, it would only be because they had been far too long in getting on with the repair job. A lawyer was not the man for the job. It was one for a Beaverbrook, a restless, dynamic driver. Let Sir Malcolm Trustram Eve go back to his big job at the War Damage Commission. There must be a "go-getter" for the repair of London's war damage. Only one Ministry was designed for the job—the Ministry of Works—which should have the power to assume the responsibility and get on with the work. During the summer months the building operatives had been worked far too long, but that had been remedied by the shortening day. The same men should not have to work every Sunday; every alternate Sunday would be quite adequate. But many of the men themselves were at fault. If the young men did not toe the line they should be put into the infantry, and the older men given a spell of unemployment. He did not like saying these things, but he did not like his constituents living in the conditions in which they found themselves. Some of the builders said they had no control of the men, and the Labour Ministry should address itself to that problem.

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	Crafts-men.	Lab-ourers.
Aberavon	2/1	1/7½
Aberdare	2/1	1/7½
Abergavenny	2/1	1/7½
Abingdon	1/11½	1/6½
Accrington	2/1	1/7½
Aldeburgh	1/11	1/6½
Aldershot	1/11½	1/6½
Alfreton U.D.	2/1	1/7½
Alnwick	2/0½	1/7½
Altrincham	2/1	1/7½
Amble	2/0½	1/7½
Amersham	1/11½	1/6½
Ammanford	2/1	1/7½
Andover	1/11	1/6½
Ardingly	1/11	1/6½
Arundel	1/11	1/6½
Ascot	1/11	1/6½
Ashby-de-la-Zouch U.D.	2/1	1/7½
Ashford (Kent)	1/11	1/6½
Ashford (Middlesex)	2/1	1/7½
Ashington	2/0½	1/7½
Ashtead	2/1	1/7½
Ashton-under-Lyne	2/1	1/7½
Aylesbury	1/11	1/6½
Aylsham	1/11	1/6½
Bagshot	1/11	1/6½
Banbury	1/11	1/6½
Barnsley	2/1	1/7½
Barnstaple	1/11	1/6½
Barrow-in-Furness	2/1	1/7½
Barry	2/1	1/7½
Basingstoke	1/11	1/6½
Bath	2/0½	1/7½
Batley	2/1	1/7½
Beaconsfield	1/11½	1/6½
Beccles	1/11	1/6½
Bedford	2/0½	1/7½
Berkhamsted	1/11	1/6½
Berwick	2/0½	1/7½
Beverley	2/1	1/7½
Bexhill	1/11½	1/6½
Bideford	1/11	1/6½
Biggleswade	1/11	1/6½
Billericay	2/0	1/7
Birchington	1/11	1/6½
Birkenhead	‡§2/1	¶
Birmingham C.B.	†2/1	†1/7½
Bishop Auckland	2/1	1/7½
Bishop's Stortford	2/0	1/7
Blackburn	2/1	1/7½
Blackpool	2/1	1/7½
Blyth	2/1	1/7½
Bognor Regis	1/11	1/6½
Bolton	2/1	1/7½
Bournemouth(District)	2/0	1/7
Bracknell	1/11	1/6½
Bradford	2/1	1/7½
Bradford-on-Avon	1/10	1/5½
Braintree	1/11	1/6½
Brentwood	2/0½	1/7½
Bridgwater	1/11½	1/6½
Bridlington	2/0½	1/7½
Brighouse	2/1	1/7½
Brighton	2/0	1/7
Bristol	2/1	1/7½
Broadstairs	1/11	1/6½
Bromsgrove U.D.	2/0½	1/7½
Buckley	2/1	1/7½
Bungay	1/11	1/6½
Burnham-on-Crouch	1/11	1/6½
Burnley	2/1	1/7½
Burslem	2/1	1/7½
Burton-on-Trent C.B.	2/1	1/7½
Bury	2/1	1/7½
Bury St. Edmunds	1/11	1/6½
Buxton	2/0½	1/7½
Byfleet	1/11½	1/6½
Cambridge	2/1	1/7½
Canterbury	1/11	1/6½
Cardiff	2/1	1/7½
Carlisle	2/1	1/7½
Carnforth	2/1	1/7½
Castleford	2/1	1/7½
Caterham	2/1	1/7½
Chard	1/10	1/5½
Chatham	2/0	1/7
Chelmsford	2/0½	1/7½
Cheltenham	2/0	1/7
Chepstow	2/0½	1/7½
Chertsey	2/0	1/7
Chester	2/1	1/7½
Chesterfield M.B.	2/1	1/7½
Chichester	1/11	1/6½
Chorley	2/1	1/7½
Cirencester	1/10½	1/5½
Clacton	1/11	1/6½
Cleveleys	2/1	1/7½
Clitheroe	2/1	1/7½
Cobham (Surrey)	2/0	1/7
Colchester	2/0½	1/7½
Colwyn Bay	2/0	1/7
Congleton	2/0½	1/7½
Coventry C.B.	2/1	1/7½
Cranbrook	1/11	1/6½
Cranleigh	1/11	1/6½
Crawley (Sussex)	1/11	1/6½
Crewe	2/0½	1/7½
Cromer	1/11	1/6½
Crowborough	1/11	1/6½
Cuckfield	1/11	1/6½
Darlington	2/1	1/7½
Darwen	2/1	1/7½
Daventry M.B.	1/11½	1/6½
Deal	1/11	1/6½
Denbigh Town	2/0	1/7
Derby C.B.	2/1	1/7½
Devizes	1/10	1/5½
Dewsbury	2/1	1/7½
Didcot	1/11	1/6½
Diss	1/11	1/6½
Doncaster	2/1	1/7½
Dorchester	1/10½	1/5½
Dorking	1/11½	1/6½
Dover	1/11	1/6½
Dovercourt	1/11	1/6½
Driffield	1/11½	1/6½
Droitwich M.B.	2/0½	1/7½
Dudley M.B.	2/1	1/7½
Dunstable	1/11½	1/6½
Durham City	2/1	1/7½
Eastbourne	2/0	1/7
E. Glam. (Mon. Val.)	2/1	1/7½
East Grinstead	1/11	1/6½
Edenbridge	1/11	1/6½
Ely	1/11	1/6½
Epping	2/1	1/7½
Exeter	2/0½	1/7½
Exmouth	1/11½	1/6½
Fakenham	1/11	1/6½
Falmouth	1/11½	1/6½
Fareham	2/0	1/7
Faversham	1/11	1/6½
Felixstowe	2/0	1/7
Filey	1/11½	1/6½
Fleetwood	2/1	1/7½
Flint	2/1	1/7½
Folkestone	1/11	1/6½
Frinton	1/11	1/6½
Frome	1/10	1/5½
Gainsborough U.D.	2/0	1/7
Gateshead	2/1	1/7½
Gillingham (Kent)	2/0	1/7
Glossop	2/1	1/7½
Gloucester	2/0½	1/7½
Godalming	1/11	1/6½
Goole	2/1	1/7½
Gosport	2/0½	1/7½
Grantham M.B.	2/0	1/7
Gravesend	2/0½	1/7½
Great Yarmouth	1/11	1/6½
Grimsby	2/1	1/7½
Guildford	1/11	1/6½
Guilsborough	1/11½	1/6½
Halifax	2/1	1/7½
Hanley	2/1	1/7½
Harpenden	2/0	1/7
Harrogate	2/1	1/7½
Hartlepools	2/1	1/7½
Harwich	1/11	1/6½
Haslemere	1/11	1/6½
Hastings	1/11	1/6½
Hatfield	2/0½	1/7½
Haywards Heath	1/11	1/6½
Hednesford	2/0½	1/7½
Hemel Hempstead	2/0	1/7
Henley-on-Thames	1/11	1/6½
Hereford	1/11	1/6½
Herne Bay	1/11	1/6½
Hertford	2/0½	1/7½
Heysham	2/1	1/7½
Hitchin	2/0	1/7
Hoddesdon	2/0½	1/7½
Holt (Norfolk)	1/11	1/6½
Horley	1/11	1/6½
Horsham	1/11	1/6½
Horwich	2/1	1/7½
Huddersfield	2/1	1/7½
Hull	2/1	1/7½
Hunstanton	1/11	1/6½
Huntingdon	1/11	1/6½
Ilfracombe	1/11	1/6½
Ingatestone	1/11½	1/6½
Ipswich	2/0½	1/7½
Isle of Thanet	1/11	1/6½
Isle of Wight	1/11	1/6½
Keighley	2/1	1/7½
Kenilworth	2/1	1/7½
Kettering M.B.	2/1	1/7½
Kidderminster M.B.	2/0½	1/7½
King's Lynn	1/11	1/6½
Kirkham	2/1	1/7½
Knowle	2/0½	1/7½
Lancaster	2/1	1/7½
Leamington M.B.	2/1	1/7½
Leatherhead	2/0	1/7½
Leeds	2/1	1/7½
Leicester C.B.	2/1	1/7½
Leighton Buzzard	1/11½	1/6½
Letchworth	2/0	1/7
Lewes	1/11	1/6½
Lichfield M.B.	2/0	1/7
Lincoln C.B.	2/1	1/7½
Littlehampton	1/11	1/6½
Liverpool	‡§2/1	¶
Llandudno	2/0	1/7
Llanelly	2/1	1/7½
London—		
12 m. radius	2/2½	1/8½
12-15 m. radius	2/2	1/8½
Long Eaton U.D.	2/1	1/7½
Longton	2/1	1/7½
Loughborough M.B.	2/1	1/7½
Louth M.B.	1/11½	1/6½
Lowestoft	1/11	1/6½
Luton	2/0½	1/7½
Macclesfield	2/0½	1/7½
Maidenhead	2/0	1/7
Maidstone	1/11½	1/6½
Malvern U.D.	1/11½	1/6½
Manchester	2/1	1/7½
Manningtree	1/11	1/6½
Mansfield M.B.	2/1	1/7½
March	1/11	1/6½
Margate	1/11	1/6½
Market Harborough	2/0	1/7
Matlock U.D.	1/11½	1/6½
Melton Constable	1/11	1/6½
Melton Mowbray	2/0	1/7
Merthyr	2/1	1/7½
Middlesbrough	2/1	1/7½
Middleton	2/1	1/7½
Middlewich	2/0½	1/7½
Milford Haven	1/11½	1/6½
Morecambe	2/1	1/7½
Morley	2/1	1/7½
Mundesley	1/11	1/6½
Nantwich	2/0½	1/7½
Nelson	2/1	1/7½
Newark-on-Trent	2/0½	1/7½
Newbury	1/11	1/6½
Newcastle-on-Tyne	2/1	1/7½
Newcastle-u.-Lyme	2/1	1/7½
New Forest (District)	1/11	1/6½
Newmarket	1/11	1/6½
Newport, Mon.	2/1	1/7½
Newport Pagnell	1/11	1/6½
Northampton C.B.	2/1	1/7½
Norwich	2/1	1/7½
Nottingham C.B.	2/1	1/7½
Nuneaton M.B.	2/1	1/7½
Oakham U.D.	1/11½	1/6½
Oldham	2/1	1/7½
Ormskirk	2/1	1/7½
Oxford	2/0½	1/7½
Oxted	1/11½	1/6½
Paignton	2/0½	1/7½
Peterborough (Borough)	2/0½	1/7½
Plymouth	2/1	1/7½
Pontefract	2/1	1/7½
Pontypridd (District)	2/1	1/7½
Port Talbot	2/1	1/7½
Portsmouth	2/0½	1/7½
Preston	2/1	1/7½
Pulborough	1/11	1/6½
Ramsgate	1/11	1/6½
Reading	2/0½	1/7½
Redditch U.D.	2/0½	1/7½
Redhill	1/11½	1/6½
Ripon	1/11½	1/6½
Rochdale	2/1	1/7½
Rochester	2/0	1/7
Rugby M.B.	2/1	1/7½
St. Albans	2/0½	1/7½
St. Helens	2/1	1/7½
St. Neots	1/11	1/6½
Saffron Walden	1/11	1/6½
Salisbury City	1/10½	1/5½
Salisbury Plain	1/11	1/6½
Sawbridgeworth	1/11½	1/6½
Saxmundham	1/11	1/6½
Scarborough	2/0½	1/7½
Scunthorpe	2/1	1/7½
Selby	2/1	1/7½
Sevenoaks	1/11½	1/6½
Sheerness	1/11	1/6½
Sheffield	2/1	1/7½
Shipley	2/1	1/7½
Shoeburyness	2/0½	1/7½
Shoreham	2/0	1/7
Shrewsbury M.B.	2/0½	1/7½
Sittingbourne	1/11	1/6½
Skegness U.D.	2/0	1/7
Sleaford U.D.	1/11½	1/6½
Slough	2/0	1/7
Smethwick C.B.	†2/1	†1/7½
Southampton	2/0½	1/7½
Southend-on-Sea	2/0½	1/7½
Southport	2/1	1/7½
South Shields	2/1	1/7½
Spalding	1/11	1/6½
Stafford M.B.	2/0½	1/7½
Staines	2/0	1/7
Stamford M.B.	2/0	1/7
Stevenage	2/0	1/7
Stockport	2/1	1/7½
Stockton-on-Tees	2/1	1/7½
Stoke-on-Trent C.B.	2/1	1/7½
Stourbridge M.B.	2/1	1/7½
Stourport U.D.	2/0½	1/7½
Stowmarket	1/11	1/6½
Stratford-on-Avon M.B.	2/0	1/7
Stroud	2/0	1/7
Sunderland	2/1	1/7½
Sutton Coldfield M.B.	2/1	1/7½
Swaffham	1/11	1/6½
Swanage	1/11	1/6½
Swansea	2/1	1/7½
Swindon	1/11½	1/6½
Tamworth M.B.	2/0½	1/7½
Taunton	1/11½	1/6½
Tenterden	1/11	1/6½
Thames Haven	2/1	1/7½
Thetford	1/11	1/6½
Thorpe Bay	2/0½	1/7½
Todmorden	2/1	1/7½
Tonbridge	1/11½	1/6½
Torquay	2/0½	1/7½
Totnes	1/11	1/6½
Trowbridge	1/10	1/5½
Truro	1/10½	1/5½
Tunbridge Wells	1/11½	1/6½
Uppingham (Salop)	2/0½	1/7½
Uttoxeter U.D.	1/11½	1/6½
Wakefield	2/1	1/7½
Walsall C.B.	2/1	1/7½
Walsden	2/1	1/7½
Walton-on-Naze	1/11	1/6½
Ware	2/0½	1/7½
Warminster	1/10	1/5½
Warrington	2/1	1/7½
Warwick M.B.	2/1	1/7½
Wellington R.D.	2/0½	1/7½
Welwyn	2/0	1/7
Welwyn Gar. City	2/1	1/7½
Wells (Norfolk)	1/11	1/6½
West Bromwich C.B.	2/1	1/7½
Westcliff-on-Sea	2/0½	1/7½
Weston-super-Mare	2/0	1/7
Weybridge	2/0	1/7
Weymouth	1/11	1/6½
Whitby	2/0	1/7
Whitstable	1/11	1/6½
Widnes	2/1	1/7½
Wigan	2/1	1/7½
Wigton	1/11½	1/6½
Willington	2/1	1/7½
Wilmslow	2/1	1/7½
Winchester	1/11½	1/6½
Windermere	1/11½	1/6½
Windsor	2/0	1/7
Wisbech	1/11	1/6½
Witham	1/11	1/6½
Woking (District)	1/11½	1/6½
Wokingham	1/11	1/6½
Wolverhampton C.B.	2/1	1/7½
Woodbridge	1/11	1/6½
Worcester C.B.	2/0½	1/7½
Workington	1/11½	1/6½
Worksop	2/0½	1/7½
Worthing	1/11	1/6½
Wrexham	2/0½	1/7½
Wroxham	1/11	1/6½
Wycombe	2/0	1/7
Wymondham	1/11	1/6½
Yeovil	1/11½	1/6½
York	2/1	1/7½

† Plus 2d. per working day. ‡ Plasterers 2/1½. ¶ Tradesmen's Labourers, 1/7½. Navvies and General Labourers, 1/6½.
§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/– per week or 4d. per day Tool Money.

NOTE.—Carpenters, Joiners and Plumbers in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the basic rate of wages for women engaged on craft processes is 1/6½ per hour after the conclusion of a probationary period of three months. During the probationary period the rate of wages is first month 1/0½ per hour, second month 1/2½ per hour, and third month 1/4½ per hour. For all women carrying out work other than on craft processes, 1/3 per hour.

For Building Trade Wages in Scotland, see page 361.

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

BRICKS, &c.

	£ s. d.
First Hard Stocks	4 17 0
Second Hard Stocks	4 10 0
Mild Stocks	3 17 0
Single Rough Stocks	3 11 0
Common Stocks	3 1 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	Stations per 1,000 s. d.	London Rated Area, North of Thames per 1,000 s. d.
Pressed	59 3	69 3
Keyed	61 3	71 3
Single Bullnose	79 3	89 3
Rustics	79 3	89 3
Whites	79 9	89 3
	£ s. d.	£ s. d.
Best blue Pressed Staffs. (London Stns.)	11 14 0	
Do. Bullnose (London Stns.)	12 4 0	
Blue Wire Cuts (London Stns.)	10 11 6	

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.	£ s. d.	£ s. d.
2½ in. 10 2 0	3 in.	12 2 0	

GLAZED BRICKS (London Stns.). Add 12½% to Prices.

Best White Ivory and Salt Glazed	38 10 0	D'ble Str'tch'rs .. D'ble Headers ..	38 10 0 35 10 0
Stretcher ..30 0 0	39 10 0	One side&two ends	40 10 0
Headers 29 10 0	40 10 0	Two sides&one end	38 0 0
Quoins, Bullnose and4½in.Flats 36 10 0		Splays and Squints	

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

ADD LEVY ON BRICKS, 3/– per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered London Area.
12 miles radius Charing Cross.

HOLLOW CLAY PARTITION BLOCKS.
London Brick Company.

Minimum Lorry Loads. Keyed.	s. d.
2" per yd. sup. 120 yds.	2 9
2½" " " 110 "	3 0
3" " " 100 "	3 7
4" " " 84 "	4 1

Half blocks *add* 2s. per yard super to above prices.

CLINKER CONCRETE.

2" per yd. sup. ..	2 0	3" per yd. sup. ..	2 7
2½" " "	2 4	4" " "	3 7

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 9
Size 12 x 9 x 2½" " "	3 0
Size 12 x 9 x 3" " "	3 7
Size 12 x 9 x 4" " "	4 1

HEMPSTEAD—KEYED TWO SIDES.

12 x 9 x 2"	2 9	12 x 9 x 3"	3 7
12 x 9 x 2½"	3 0	12 x 9 x 4"	4 1

Per yard super d/d. Free on site, London.
Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. .... per ft. cube	4 7
Do. do. delivered on road waggons as above stations .....per ft. cub.	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ¼d. beyond 30 ft.	
HOPTON-WOOD STONE—	s. d.
F.O.R. Quarries, Wirksworth, Derbyshire. Random blocks from 10ft.and over P.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality*.	
Delivered at any Goods Station, London,	
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) ..... "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) .... "	1 8½
1½ in. to 2 in. ditto ..... "	1 4½
HARD YORK—	
Delivered at any Goods Station, London.	
Scrappied random blocks . per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) .....per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) ..... "	3 5
3 in. ditto ditto .... "	2 8
2 in. self-faced random flags..per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube : Plain, 10s. ; Moulded, 12s. 6d.
Small section cills and copings, 15s.

SAND.

Thames Ballast	11s. 6d. per yd.	
Pit Ballast	10s. 0d. " "	delivered
Pit Sand	12s. 0d. " "	2 miles
Washed Sand	13s. 0d. " "	radius
¾ in. Shingle	10s. 6d. " "	Padding-
¾ in. Broken Brick	16s. 0d. " "	ton.
Pan Breeze	10s. 0d. " "	

CEMENT.

Best British Portland Cement. Standard Specification, delivered London area	£ s. d.
6 ton loads and upwards site .... per ton	2 11 0
1 to 6 tons site	2 14 0
Alongside Vauxhall in 80-ton lots	2 8 6
" Ferrocrete " Rapid Hardening Cement—	
6 ton loads and upwards site	2 17 0
1 to 6 tons site	3 0 0
Alongside Vauxhall in 80-ton lots	2 14 6
" Aquacrete " Water Repellent, " Blue Circle " cement, 30s. per ton on ordinary " Blue Circle " prices.	
" Colorcrete " Nos. 1 and 2. Coloured rapid Hardening Portland Cement in 6-ton lots	4 11 0
" Colorcrete " not rapid hardening, according to colour, from £7 to £15 10s. per ton.	
" Snowcrete " White Portland Cement (in free paper bags)	11 5 0
Under one ton per cwt.	0 13 2
" 417 " Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 ton lots and upwards	3 11 0
Plus packages at current prices.	
Super Cement (Waterproof), bags extra	4 1 0

NOTE.—Jute sacks charged 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton.
Less than one ton 1s. 9½d. nett each.
Credit 1s. 6d. nett each when returned in good condition within two weeks.

£ s. d.	£ s. d.
Roman Cement 8 10 0	Keene'sCement,White 7 0 0
Parian Cement 7 0 0	" " Pink 6 10 0

Cementone Colours for cement according to tints, per cwt. from £3 5s. 0d.

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station.

Per 1,000 actual	£ s. d.		£ s. d.
24 by 12 .....46 12 6	18 by 10 ..	....24 12 6	
22 by 12 .....38 5 0	18 by 9	23 0 0	
22 by 11 .....34 15 0	16 by 10	22 0 0	
20 by 12 .....33 10 0	16 by 8	17 0 0	
20 by 10 .....30 15 0			

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink ..	4 2 6	Sirapite, Coarse	4 11 6
" White ..	4 10 0	" Finish	4 19 6
Pioneer	5 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime ..	3 7 6	Grey Stone Lime Chalk Lime	3 1 0 3 1 0
Granite Chippings	2 0 0	Hair per cwt. ..	3 15 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in paper bags, £2 12s. 6d., 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons..... Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	£7 0 0
Ditto hand-made ditto	8 6 6
Ornamental ditto	8 14 0
Hip and valley tiles—Hand-made	17 0
(per dozen) —Machine-made	16 0

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	Foot cube. s. d.		£ s. d.
Dry English Wainscot Billets ..	16 0	to	0 18 0
Dry Slavonian Billet Wainscot ..	17 0	to	1 0 0
Dry Cuba Mahogany logs ..	21 0	to	1 4 0
Square-edged Honduras Mahogany			0 16 6
Log Cut Honduras Mahogany			0 17 6
American Figured Oak			0 13 0
American Plain Oak			0 12 6
Jap, Figured Oak			0 13 0
Jap, Plain Oak			0 12 6
Teak			0 15 6
American Whitewood			0 12 6
African Whitewood			0 8 0
African Mahogany			0 11 0
Australian Walnut			0 19 0
Australian Silky Oak			0 12 6
Best Scotch glue ..... per cwt.			5 0 0
Liquid glue..... per gallon			1 2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes		
2 in. by 3 in. to 4 in. by 11 in.	47 0 0	58 0 0

PLANED BOARDS.
PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	71 0 0
	Per square. s. d.
1 in. plain edge flooring	56 3
1¼ in. ditto	70 6
1 in. tongued and grooved	56 3
1¼ in. ditto	70 6

MATCHING.

	per square. s. d.
¾ in.	40 3
¾ in.	45 0
1 in.	59 0

PLUMBERS' BRASS WORK.

Delivered in London.
M.O.H.

S.D. BIBCOCKS CRUTCH HEAD, FOR IRON

½ in.	¾ in.
33/–	51/– per doz.

TOILET BIB COCKS FOR IRON.

½ in.	¾ in.
60/–	72/– per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
33/–	48/–	86/–	209/–	281/–	456/–per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
45/–	77/6	123/–	240/–	372/–	624/– per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
5/6	6/8	11/–	24/–	36/–	56/– per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
72/–	115/–	144/–	288/–	384/– per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
14/–	18/6	25/9	45/3	64/9	71/6 per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½in.	4 in.
10/9	13/6	25/–	37/–	46/– per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½×6 lbs.	1½ × 6 lbs.	2 × 7 lbs.	3 × 7 lbs.
Lead P.	26/–	34/–	55/–	92/– per doz.
Lead S.	34/–	41/–	67/–	115/– per doz.

SOLDER.—Plumbers', 1/7. Tinmen's, 2/1. Blow pipe 2/6 per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &c., to LONDON STATION PER TON—

	£	s.	d.
R.S. Joists, cut and fitted	£24	0	0
Plain Compound Girders	26	10	0
Stanchions	29	0	0
In Roof Work	37	10	0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
¼ in.	23	5	0	½ in.	21	15	0
⅝ in.	22	15	0	¾ in. to 2¾ in.	21	5	0
⅞ in.	22	5	0				

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross. 10/17

	Tubes. ½"/⅝"	Tubulars. ½"/⅝"	Tubulars. 19/24"	Flanges. ½"/2"	Flanges. 2½"/6"
	%	%	%	%	%
Light weight	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ½"/⅞" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/7	1/3½	5d.
3½ in.	1/8½	1/5	5d.
4 in.	1/8½	1/7½	7d.
4½ in.	1/10	1/10	8½d.
5 in.	2/2½	2/2	9½d.

O.G. GUTTERS.

3 in.	2/0½	1/8½	5½d.
3½ in.	2/3½	1/8½	7d.
4 in.	2/3½	1/9½	8½d.
4½ in.	2/5	2/2	9½d.
5 in.	2/11	2/5	11d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/5	1/7	2/4
2½ in.	2/6	1/9½	2/9½
3 in.	2/11	2/3½	3/5
3½ in.	3/5½	2/8½	3/11
4 in.	4/0	3/3	4/9

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent. 2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches
2 in.	3/9½	2/7½	3/2
2½ in.	4/5	2/10½	3/11½
3 in.	4/9	3/2	4/8½
3½ in.	4/10½	3/11½	5/5½
4 in.	5/3½	4/5	6/3½

L.C.C. COATED DRAIN PIPE.

	cwt.	qr.	lbs. in 9 fts.	per yard.	Bends.	Branches.
3 in.	0	3	14	6/0	7/3	11/6
4 in.	1	1	17	8/7	8/2	14/5
5 in.	1	2	18	10/7	14/9	22/3
6 in.	2	0	1	12/9	17/0	29/8

Gaskin, 75/- per cwt.

	Per ton basis in London. £	s.	d.
IRON.—Staffordshire Crown, Merchant quality	20	15	0
IRON.—Staffordshire Marked Bars	21	10	0
Mild Steel Bars	19	15	0
Mild Steel Hoops	21	10	0

	Ex Merchant's Stock, per ton (two-ton lots).		
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24	17	6
24 gauge	25	2	6
26 gauge	25	17	6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27	0	0
24 gauge	27	10	0
26 gauge	28	15	0
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28	10	0
24 gauge	29	0	0
26 gauge	30	5	0

	Per ton £	s.	d.
Cut Nails, 3 in. and up	28	10	0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

	£	s.	d.
Raw Linseed Oil (5 galls.) .. per gallon	0	7	8
Boiled Linseed Oil (5 galls.) .... "	0	8	0
Genuine Ground English White Lead, per cwt.	3	11	9
Genuine White Lead Paint, 14-lb. tins free, per cwt.	4	16	6
Genuine Red Lead .... "	2	18	6
Linseed Oil Putty (Kegs extra) .. "	1	7	3
Utility Putty (Packages returnable) "	1	3	9
Size, XD quality .... ftn.	0	4	9

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from November 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen	2/2	2/1½	2/1	2/0½	2/-	1/11½
Labourers	1/8½	1/8¼	1/7½	1/7½	1/7	1/6½

Aberdeen .....A	Dumfriesshire A2	Inverness .....*	Perthshire A2
Ayrshire .....A	Dundee .....A	Inverurie A1	Peterhead A1
Banff .....B	Dunoon .....A	Kincardineshire ..A2	Renfrewshire .....A
Berwickshire A2	East Fife .....A	Kinross-shire .....A	Rothesay .....A
Bridge of Allan ....A	East Lothian .....A	Lanarkshire .....A	Roxburghshire A2
Broughty Ferry ....A	Edinburgh .....A	Midlothian .....A	St. Andrews .....A
Clackmannanshire..A	Fifeshire .....A	Monifieth .....A	Selkirkshire A2
Doune.....A	Forfarshire A2	Moray and Nairn B	Stewartry A2
Dunblane .....A	Glasgow .....A	Newport .....A	Stirlingshire .....A
Dumbartonshire ..A	Greenock .....A	Peeblesshire A2	Stornoway A2
Dumfries A1	Hamilton .....A	Perth .....A	Tayport .....A
			West Lothian .....A

*This town has its own rates : Masons, 1/11; Carpenters, 1/11 ; Slaters, 1/11; Plumbers, 1/11½; Plasterers, 2/- but 2/0½ is paid owing to the scarcity at present ; Painters, 1/11 and Labourers, 1/6½.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 359

VARNISHES, &c.

		Per gallon. £	s.	d.
Oak Varnish	Outside	0	16	0
Fine do.	"	0	18	0
Fine Copal	"	1	0	0
Pale Copal	"	1	2	0
Pale Opal Carriage	"	1	6	0
Best do. do.	"	1	14	0
Floor Varnish	Inside	1	0	0
Fine Pale Paper	"	1	0	0
Fine Copal Cabinet	"	1	4	0
Fine Copal Flatting	"	1	2	0
Hard Drying Oak	"	1	0	0
Fine Hard Drying Oak	"	1	1	6
Fine Copal Varnish	"	1	2	6
Pale do.	"	1	14	0
Best do.	"	1	4	6
Best Japan Gold Size	"	1	14	6
Best Black Japan		0	12	0
Oak and Mahogany Stain (water)		0	14	0
Brunswick Black		0	9	6
Berlin Black		0	16	0
Knotting (patent)		0	17	0
French and Brush Polish		0	14	0
Liquid Dryers in Terebene		0	11	0

LEAD, &c.

(Delivered in London.)	Per ton. £	s.	d.
LEAD.—Sheet, English, 4 lb. and up	38	0	0
Pipe in coils	40	5	0
Soil pipe	44	5	0
Compo pipe	49	5	0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills.....per ton £18 0 0.

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THE SCOTTISH BUILDER

NEW BUILDINGS

LANARK.—Plans prepared for alterations and additions to houses at Corbiehall Farm, for which the architect is Robert Bennie, 77, Lanark-rd., Carstairs.

Wages and Hours.

As from November 1, the present wages rates for craftsmen and labourers have been increased by 1½d. per hour. Female labour also receives the same increase, and apprentices receive 2s. 9d. per week on the present scale.

The Scottish N.J.C. for the building industry have resolved that, in order to make the fullest use of the available daylight owing to the continuation by the Government of Summer Time, the normal working hours of 44 hours per week may be worked between the hours of 8 a.m. and 6 p.m. on week days, and 8 a.m. and 1 p.m. on Saturdays during December and January. The appropriate overtime rates will accordingly fall to be paid prior to the starting time, and after the stopping time adopted within these hours in any particular job or site.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
18 oz.	3¼
24 oz. Clear or "R" quality	5
26 oz.	6½
32 oz.	8½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	6½d.
Rough cast double rolled, ⅛ in.	7½d.
Rough cast double rolled, ¼ in.	7½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	10½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s.	d.
Wire Rolled, ¼ in. thick	0	9½
Wire Cast, ¼ in. thick	0	9½
Georgian Wired Cast	0	10
"Calorex" Sheet, 21 oz.	2	6
" " 32 oz.	4	0
" Cast, ¼ in. thick	0	9½
" " ⅛ in. thick	1	0
" " ¼ in. thick	1	2
Non Actinic Glass, ¼ in. thick	0	9½
" " ⅛ in. thick	1	0
" " ¼ in. thick	1	2

"VITA" GLASS.

	Per ft. s.	d.
"Vita" Plate Glass, about ⅛ in. thick—		
To 7 ft. super	5	0
Over 7 ft. super	7	6
"Vita" Sheet Glass, about 18/20 oz.	2	0
Cathedral "Vita" Glass :		
¼ in. thickness	2	0
⅛ in. "	3	0
⅛ in. Georgian Wired "Vita" Glass	3	6

GLASS BRICKS.

	s.	d.	
P.B. 1—8 in. × 4¼ in. × 3¼ in.	2	9	each nett
P.B. 2—5¼ in. × 5¼ in. × 3¼ in.	2	6	"
P.B. 3—7¼ in. × 7¼ in. × 3¼ in.	3	6	"
P.B. 32—7¼ in. × 7¼ in. × 3¼ in.	3	6	"

Radiused Corner Bricks to match up with—

P.B. 2	4	6	each nett
P.B. 3	6	0	"
P.B. 32	6	0	"

TIMBER AFTER THE WAR

CONFERENCE AT THE LONDON CHAMBER OF COMMERCE.

On Wednesday afternoon, October 25, about 100 people assembled in conference, by invitation of the Timber Development Association, at the London Chamber of Commerce, E.C.4. They were representatives of associations of importers, merchants, builders, manufacturers and others interested as employers or employees in timber-supplying and using industries. Mr. Brian Latham, Chairman of the Timber Development Association, presided, and moved the following resolution :—

(i) *That this meeting of representatives of employers and employees engaged in the timber-supplying and using industries of the United Kingdom views with grave concern the present lack of adequate supplies of timber and urges the Government to make provision for securing sufficient supplies of timber in their plans for post-war reconstruction, including housing. Adequate supplies of timber are of paramount importance in our national economy. They are obtainable from the vast world resources, and should be made available to meet the urgent existing and potential demand throughout the country for home consumption and for export in the form of manufactured goods.*

(ii) *That a fund be established to finance a national propaganda campaign to impress upon the public and the Government the importance of this question and to emphasise the relative advantages of timber over substitute materials, and that the bodies here represented be asked to contribute to this fund.*

(iii) *That a committee be formed to administer the fund and to take active steps to implement and carry into effect the foregoing resolutions. The committee to consist of one representative from each association or organisation subscribing £1,000 or more in any one year, with an additional representative for each further complete £1,000 subscribed. Associations or organisations may appoint alternative members to the committee which shall have power to co-opt.*

The Present Position.

Proposing the resolution, the Chairman said it was put forward only as a basis of discussion and with the view to getting the opinions of all parties concerned. He outlined the present timber position. Pre-war there were, he said, some 1,000,000 workers in the building trade, of whom about 150,000 were joiners and carpenters. There were also some 400,000 unskilled labourers, of whom a considerable number were employed with the joiners and carpenters. Outside the building industry 91,000 persons were engaged in sawmilling and woodworking, whilst in the furniture trade there were 145,000 employees. In addition to these were the woodworkers in shipyards, motor body and lorry works, railway carriage and waggon works, piano and gramophone factories, and a score of other trades. Further, before the war there had been a large number of men handling timber at the ports and engaged in storing, seasoning and despatching. It would not be far wrong to say that in this country 1,000,000 persons were then getting their livelihood through timber in some form or other. Timber was one of the world's finest raw materials, and used for an almost inconceivable number of purposes. During the war timber had been scarce, and timber importers and consumers had co-operated with the Government in reducing the consumption to the lowest possible level. This period of emergency would shortly pass, but meanwhile the timber industry found itself in a parlous condition because interested parties were giving publicity to a statement that the present shortage would endure under peace-time conditions. These people intimated that it was a waste of time to design in timber because none would be available. But it was a matter of common knowledge to all engaged in the industry that the main trouble from 1920 until the outbreak of war had not been a dearth of timber but the existence of slumps due to the fact that the producing countries wished to throw more timber on this market than could be absorbed. It was not at all clear why, once the difficulties inherent in the immediate post-war situation had been overcome, supplies should not again be adequate. Except possibly in Poland there had been no great destruction of forests. Mr. Latham amplified his point by a survey of the great timber producing countries, both of soft and hard wood.

Foreign Exchange.

Coming to the question of foreign exchange, the chairman said there were many countries anxious to buy our manufactured goods and pay us in timber—*e.g.*, Sweden had ample supplies of excellent soft wood housing timber which she was anxious to exchange for coal, of which she had none. There were great timber-producing countries in our own Empire waiting for further intensive development. The standard of living amongst the population of British Tropical Africa could be very greatly raised if they were in a position to take and pay for larger quantities of the manufactured amenities which this country could provide, and one of the chief sources of wealth in these enormous territories was timber. The same argument applied to the British West Indies and our possessions in the Southern Pacific such as North Borneo. With regard to shipping, it had been calculated that when the convoy system could be dispensed with the annual cargo-carrying capacity of any ship would be doubled or trebled.

"The use of timber," said the chairman, "is necessary for the comfort of our people. The employment of sufficient wood in a house, whether in fittings or furniture, makes all the difference between comfort and a chilly austerity. There is nothing like the traditional English house as matured by our builders and craftsmen over the centuries for comfort and well-being. Here every material, whether it be brick, slate or timber, plays its proper part. Steel houses, concrete houses and aluminium houses can all be necessary as temporary expedients; but they will never satisfy our people for permanent houses. It is not right that our folk in perpetuity should be condemned to endure in their dwellings such war-time monstrosities as concrete staircases."

The case for timber could be put much more strongly if the associations now fighting individual battles combined their resources with the assistance of the trade unions. He suggested that each of these associations should continue as at present to look after its own sectional interest, but they should all concentrate the whole of the funds they could make available on a National Timber Industries Press and Parliamentary campaign during the years 1945, 1946 and 1947, which, in the opinion of many, would be the vital reconstruction years during which the battle for timber would be won or lost. This campaign should be directed with the aid of professional advisers by a committee representative of those bodies subscribing to the Fund.

Discussion.

The resolution was formally seconded, and a very long discussion ensued. On a suggestion of Mr. Cuthbert Greig, representing various associations of timber users, Clause (i) was taken as a separate resolution. Various speakers subsequently criticised the Timber Control severely, blaming it for the short supply and high price of timber. An amendment was moved to insert after the words "securing sufficient supplies of timber" the words "at a reasonable price." If timber was only available at present prices, it was alleged, house builders would not be able to use it. If it was not available in the post-war years the responsibility would rest upon the Timber Control, which was only another name for the Timber Trades Federation. Manufacturers, along with trade unions, had done their best to get a voice in timber control, and, as a result, an advisory committee had been appointed. But its advice had never been sought.

The amendment was lost, 8 voting for it and 25 against. The resolution was then put and carried by 35 to 1.

The discussion on the remaining clauses of the resolution led to their being withdrawn with a view to their being submitted to the associations represented at the conference. These associations were invited to make suggestions to a committee to be elected, which would consider the suggestions, circulate them to the associations, and call another meeting. It was agreed that suggestions should be sent in before the end of the present year and the meeting be held in January.

A committee of 13 members representing the various interests at the conference was elected, and a vote of thanks to the chairman terminated the proceedings.

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CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

NOVEMBER 8.

Havant and Waterloo U.D.C.—Adaptation of "Claremont," St. Mary's-rd., Hayling Island, for British Restaurant. E., Council Offices, Park-road, North, Havant. Dep. £1.

NOVEMBER 9.

Ramsbottom U.D.C.—Erection of 5 bus shelters. A. Plunkett, E. and S.

Wakefield T.C.—Work in all trades for proposed extension of workshops block No. 4, Technical College, Newstead-rd. S. G. Wardley, City S.

NOVEMBER 13.

Nuneaton T.C.—Reinstatement of 12 houses. B.S. Dep. £2 2s.

Rochdale T.C.—Extension to furnace-room at crematorium. B.S.

West Riding War Agricultural Executive Committee.—Adaptation work at Woolas Grange Farm. W. P. Richardson, Chief Executive Officer, Stray Hotel, Harrogate.

NOVEMBER 15.

Hornchurch U.D.C.—Demolition of 16 houses. T. E. Spencer, S.

NOVEMBER 22.

***Beckenham T.C.**—Erection of prefabricated concrete canteen kitchen and brick boiler house at Marian Vian School. J. Dove, A.M.Inst.C.E., B.E. Dep. £2.

DECEMBER 7.

Cheltenham T.C.—Erection of 4 experimental houses at Kipling-rd., St. Mark's. G. G. Marsland, B.E. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

NO DATE.

Ashton-under-Lyne E.C.—Painting, etc., at West End School. G. W. Handforth, D. of E., 8, Warrington-st., Ashton.

***Glos.**—External painting of glasshouses. Surveyor of Works, Land Settlement Association, Ltd., 43, Cromwell-rd., London, S.W.7.

ROADS, SEWERAGE AND WATER WORKS

NOVEMBER 15.

Liverpool T.C.—Surface water sewer, approx. 1,270 yds. long, of concrete pipes, 36 in. to 78 in. dia. at Brook House housing estate, Huyton. City A. and Director of Housing, Blackburnchbrs., Dale-st., Kingsway, Liverpool, 2. Dep. £2 2s.

NOVEMBER 21.

King's Lynn Group.—Construction of roads and sewers. Acting B.E., Town Hall.

DECEMBER 7.

Swansea C.B.—Construction of roads and sewers. J. B. Bennett, A.M.Inst.C.E., B.E. and S. Dep. £2 2s.

PUBLIC APPOINTMENTS

NOVEMBER 11.

Southampton C.B.—(a) Instructor in Carpentry and Joinery; (b) Instructor in Plumbing. Forms from F. L. Freeman, Secretary, Ed. Office, Civic Centre, Southampton.

NOVEMBER 13.

Essex C.C.—(a) Senior Planning Assistant (salary to be fixed); (b) Junior Draughtsman. £75-£12 10s.-£150, plus bonus. Applications, accompanied by three testimonials, to J. E. Lightburn, C. of C.C., County Hall, Chelmsford.

GENERAL BUILDING WORK

Altrincham.—Managers of Laureston High school, Washway-rd., Sale, Ches, acquired York House, Brooks's-dr., for conversion into school; British Red Cross Society, The White House, Booth-rd., propose adaptation of The Mount for headquarters and erection of lecture hall; H. Hankinson (L.), 3, The Downs, is architect for development of site corner of Ridgway-rd., and Brooks's-dr., for C. Dyson. Committee of Y.M.C.A., 30, Ashley-rd., propose conversion of premises into Youth Centre.

Ashton-in-Makerfield.—U.D.C. propose 200 houses at Downall-green.

Brighouse.—T.C. propose houses on sites at Stoney-la., Smith House-la., and Lower Crow Nest House housing estates.

Bury.—Alterations at Brandlesome House, for E.C.

Cheshire.—E.C. propose site for Technical school for Altrincham and Sale districts.

Claines.—Worcestershire E.C. propose adaptation of "Oakfield," Droitwich-rd., for training centre.

Daventry.—R.D.C. propose 40 houses at Long Buckley.

Gateshead.—B.E. to prepare plans for improving cooking and feeding arrangements at Bensham Hospital.

Huyton.—Lancashire E.C. propose elementary school at Bowring Park estate.

Keighley.—Trustees of Congregational Church, Devonshire-st., acquired site for Church and Sunday-school.

King's Lynn.—T.C. to adapt Thurlow House for maternity home.

Leeds.—T.C. to propose housing estate at Beckett Park.

Leicestershire.—Agricultural Education Joint Committee propose adaptation of buildings for Farm Institute, at £5,000.

Littleborough. — U.D.C. propose housing schemes at Smithy Bridge, Shore and Laneside Farm.

Manchester.—Young People Special Committee propose alterations at Rusholme Congregational Chapel and New Islington Public Hall for social centres.—T.C. approved: Conversion of premises into welfare centre for Mrs. B. L. Taylor. Plans by A. A. G. Toone (A.), 37, Princess-st. Depot for Globe & Simpson, Ltd. Ogden & Raine, architects, 65, Wolstenholme-rd., Sheffield.—Halliday & Agate (F. & A.), 14, John Dalton-st., architects for rebuilding premises.

Middlesbrough.—J. Anderson, 4, Mosley-st., Newcastle-on-Tyne, prepared plans for erection of greyhound stadium at Trunk-rd.

Middleton.—E.C. propose erection of secondary school at Mainway.

Newcastle-under-Lyme.—Ford & Slater, Wedgwood-pl., Burslem, are architects for garage.—T.C. received approval of M.H. for adaptation of buildings for maternity home.

Newcastle-under-Lyme. — T.C. appointed Bournville Village Trust, Kings Norton, Birmingham 20, as architects for preparation of plans for 880 houses.

North Shields.—Wm. Stockdale, 73, Howard-st., North Shields, prepared plans for extensions to offices, for G. R. Purdy (Trawlers), Ltd.—J. R. Wallace, 14, Northumberland-sq., North Shields, is architect for converting Marine House, Tynemouth-ter., into four flats for Victor Grunhut.

Oldham.—E.C. propose classrooms, gymnasium, etc., at Hollinwood Senior school.—T.C. propose: Alterations at General Hospital; alterations at Westhulme Hospital.

Radcliffe.—E.C. propose electricity substation.—T.C. approved: Additions at Witton Cotton Mills, for Lancashire Cotton Corporation, Ltd., Hopwood Hall, Hopwood, nr. Middleton.

Romford.—Extensions proposed at Victoria Hospital, at £4,000.

Ripley (Derbyshire).—Board of Governors of Ripley and District Hospital propose plans for Nurses' Home and Out-patients' dept.

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Rochdale.—Health Committee propose additions at Birch Hill Hospital, at £102,000.

Rugeley.—U.D.C. propose provision of maternity home.

Stafford.—Committee of British Legion propose headquarters.

Stockton-on-Tees.—G. P. Stainsby, 25, High-st., prepared plans for erection of lavatories, for Newman & Sons. T. J. Thomson & Sons, Millfield Scrap Works, to erect offices and garage.

Thetford.—T.C. appointed Hunt & Coates (LL.), 84, Guildhall-st., Bury St. Edmunds, as architects for preparation of housing scheme.

Timperley.—Cheshire E.C. propose elementary school.

Towcester.—Northants E.C. propose extensions at Grammar school, at £2,000.

Wellingborough.—Northants E.C. propose extensions at High school, at £2,500, and at Grammar school, at £2,500.

Whitehaven.—T.C. received approval of M.H. for completion of 10 houses at Hensingham estate, at £5,522.

BRITISH RESTAURANTS AND CANTEENS

Boston.—E.C. propose kitchen at Carlton-rd. school.

Droylsden.—Lancashire E.C. propose dining-hall at Manor-rd. Moorside school.

Durham.—A further 10 central school kitchens to be provided by County E.C. Plans by F. Willey, 34, Old Elvet, Durham.

Grantham.—L.N.E.R. propose works canteen at Grantham Station.—E.C. propose canteen scullery at St. Mary's school.

Middlesbrough.—Canteen proposed at Commercial-st., for Head, Wrightson & Co., Ltd. Plans by F. W. Turnbull, White House, Carlton, Stockton-on-Tees.

Middleton.—E.C. propose scullery facilities at schools.

Rochdale.—T.C. propose canteen for employees at cleansing depot, at £2,000.

Slaidburn.—E.C. propose school canteen.

Staffordshire.—E.C. propose dining-rooms and sculleries at Rectory gdns., Aldridge; Pheasey estate, Great Barr, Streetly Council and Pelsall Senior school.

West Riding.—E.C. propose alterations for dining-room at Crossflatts Junior and Mixed and Infants' schools, at £465. Wash-up kitchen at Denholme school, at £375

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government departments.*

Altrincham.—Erection of mess room, etc., at sewage farm, for T.C. E. M. Slater, B.S.: *C. Marston & Son, 188, Stockport-rd., Timperley, Altrincham, £193.

Croydon.—Erection of woodwork room at Oval school, for E.C.: *Walker (Tooting), Ltd., £705.

Glasgow.—Alterations and additions at Kinning Park cooking depot. Robert Bruce, architect, Municipal-bldgs. Excavation, brick and building works, etc.: *James Fleming, Glasgow, £4,339.

Hull.—Civil engineering works for extensions to plant at generating station, for E.C. D. Bellamy, City E.E.: *Quibell & Son, Ltd., 354, Beverley-rd., Hull, £37,698.

Kendal.—Erection of sub-station, for T.C. G. German, B.S.: *Hayes & Parkinson, joiners' work, Captain French-la., Kendal, £117; *J. Steel & Co., plasterers' work, Highgate, Kendal, £131; *S. Downham & Sons, bricklayer, etc., Gillingsale, Kendal, £1,504.

¶London (Air Ministry).—The Directorate of Contracts has placed the following new contracts of £500 or over for week ended October 28:—

Agricultural work: E. Doe & Sons, Maldon, Essex.

Fencing work: Fencing (Shepperton), Ltd., Shepperton-on-Thames.

Erection of structural steelwork: G. M. Carter (Erectors), Ltd., London, S.W.1; Wm. Bain & Co., Ltd., Coatbridge.

Painting work: Fields, Ltd., Reading; Priestley Studios, Ltd., Gloucester; Downing Rudman & Bent, Ltd., Chippenham, Wilts; and C. & T. Painters, Ltd., London, N.W.10.

Building work: A. Luxon & Son, Newquay, Cornwall.

Electrical work: Stenson & Co., Dundee; and Green & Smith, Ltd., Leeds 2.

Roofing work: Industrial Engineering, Ltd., London, W.C.2.

General maintenance work: G. H. Miller & Co., Ltd., London, W.C.1; J. Cryer & Sons, Ltd., Fleetwood, Hants; H. Dorrington & Son, Gainsborough; R. W. Bell & Co. (Builders), Ltd., Newcastle-on-Tyne; and T. Wilson & Son, Ltd., Northampton.

Surface dressing work: Henry Kent (Builders), Ltd., London, S.E.13.

¶**London (Ministry of Works).**—Contracts placed by M.O.W. during week ending October 26:—

Carmarthenshire: Building work, Isaac Jones, Temple-st. Joinery Works, Llanelly.

Durham: Building work, David Glen, Queen's-rd., Jarrow-on-Tyne.

Essex: Building work, Henry Potter (Wm. Sharp, Ltd.), Fairfield Works, Chelmsford.

Gloucester: Building work, H. F. N. Greenhill & Sons, Winterstock-rd., Bristol.

Lancs: Building work, R. W. Gregson, Milk-st., Tyldesley, Lancs.

Manchester.—Public lavatories and time-keeper's office at Princess-rd. and Barlow Moor-rd., West Didsbury, for T.C. G. Noel Hill (F.), City A.: *Normantons, Ltd., 165, Plymouth-gr., Longsight, Manchester 13.

Maryport.—Erection of 200 houses, for North-Eastern Housing Association: *Border Engineering Contractors, Ltd., Whitehaven (subject to M.H. approval).

Middleton.—Completion of two houses at Rochdale-rd.: *H. & J. R. Bradshaw, Hill-la., Blackley, Manchester 9, £1,650.

Morpeth.—Completion of 46 partly built houses at Widdrington Station, for R.D.C.: *R. Carse & Son, Amble, £18,270 (subject to M.H. approval).

Newcastle-under-Lyme.—Works for T.C.: External painting at 207 houses at Knutton-la., St. Giles'-rd., St. John's-pl., St. Bernard's-rd., and Viggars-pl., Knutton; also 95 houses at Hempstalls-la., Beattie-av., and St. Michael's-rd.: *E. Bagguley & Son, 28, Bagnall-st., £1,500 and £689; conversion of Moorland House, Porthill, into two dwellings: *H. Stubbs, Liverpool-rd., Cross Heath, £1,080.

Oldham.—Extensions and alterations at Gower-st.; kitchen buildings, for E.C.: *Squire Ashton & Sons, Ltd., Cheapside, Oldham.

Rochdale.—Alterations to lavatories at Castleton and Mellor-st. Police Stations, for Watch Committee. S. H. Morgan, B.S.: *Schofield & Hopkinsno, Oldham-rd., Lower-pl., Oldham.

Worcestershire.—Repairs at Bromsgrove High school, for E.C. H. Rowe & Son, County Architects, 38. Foregate-st., Worcester: *W. Weaver, Ltd., The Strand, Bromsgrove.

Loans to Local Authorities.

THE following loans were sanctioned by the M.o.H. during the quarter ended September 30 to Local Authorities in England and Wales: Housing, £527,548; Municipal Services (including clinics, sanatoria and mental hospitals), £381,977; Swimming Pools, Playing Fields, Recreation Grounds, Open Spaces, etc., £6,011; Water Supply, £135,218; Disposal of Waste Products (Sewerage and Sewage Disposal and refuse destruction), £56,753; Education Services (including Libraries and Museums), £25,513; Air Raid Precautions, £4,305; Roads and Bridges (including Private Street Works), £32,419; Other Services (including loans to defray contributions, etc, under War Damage, Act, 1943), £78,500.—Total, £1,248,244.

British Standard Specifications.

The following specifications have been issued from 28, Victoria-street, S.W.1:—

Revised B.S. specification for lightly insulated cleat wire for use on insulating cleats (B.S. No. 1096-1944). (Price 2s. post free.)

B.S.S. for pitch mastic flooring and pitch mastic flooring incorporating lake asphalt (B.S. Nos. 1093 and 1177). (Price 2s. post free.)

B.S.S. for sizes of stress graded softwood timbers (B.S. No. 1175-1944). (2s. post free.)

B.S.S. for milled lead sheet and strip (B.S. No. 1178-1944). (Price 1s. post free.)

B.S. 1100, Pt. 2—1944. Production Control in the Small Factory. (2s. post free.)

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